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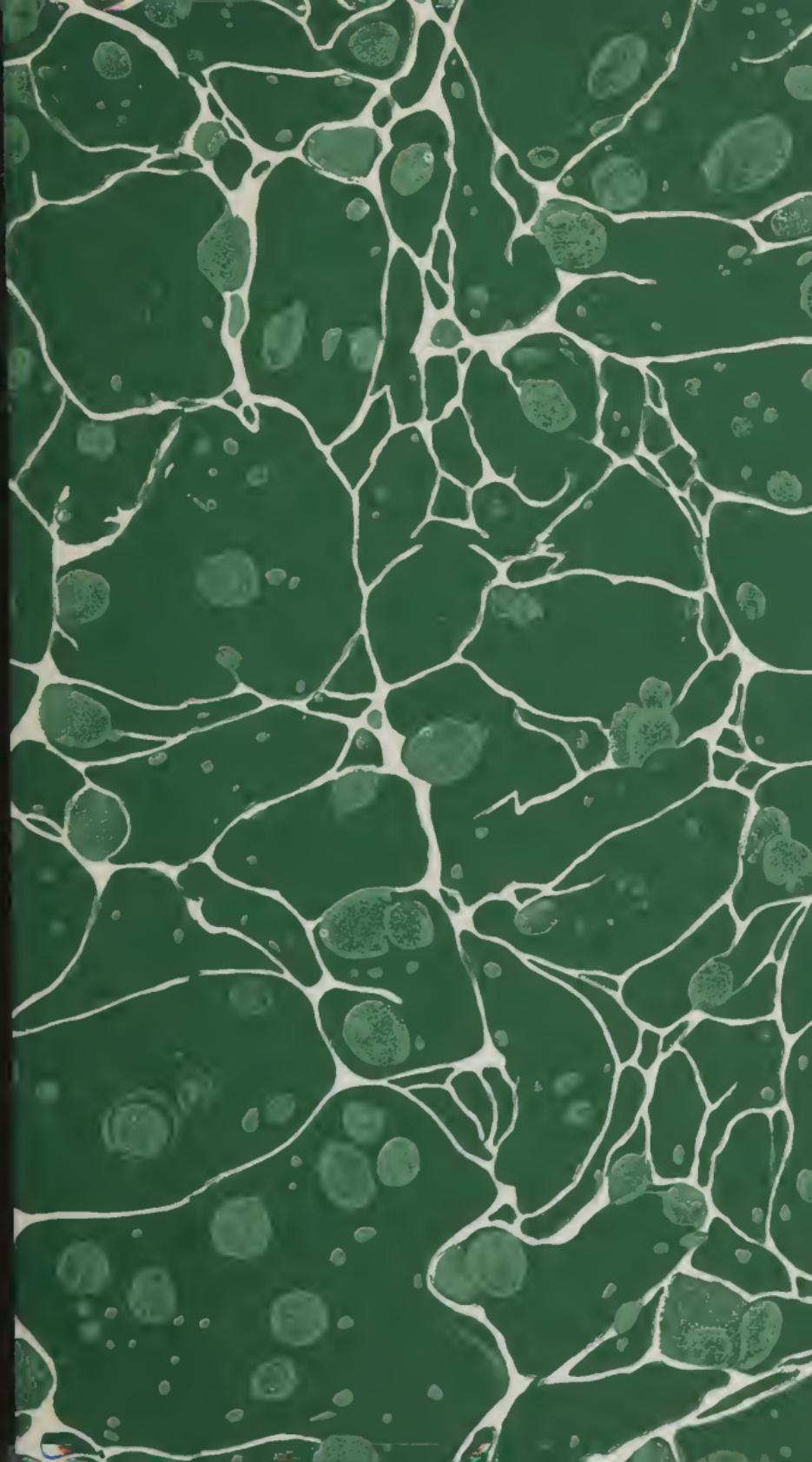


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# THE HAND-BOOK

OF

# PRACTICAL RECEIPTS,

OF EVERY-DAY USE;

A MANUAL FOR

The Chemist, Druggist, Medical Practitioner,  
Manufacturer, and Heads of Families;

COMPRISING

THE OFFICINAL MEDICINES, THEIR USES AND MODES OF PREPARATION;  
AND FORMULE FOR TRADE PREPARATIONS, MINERAL WA-  
TERS, POWDERS, BEVERAGES, DIETETIC ARTI-  
CLES, PERFUMERY, COSMETICS, ETC.

A GLOSSARY OF THE TERMS USED IN CHEMISTRY AND MEDICINE,  
INCLUDING OLD NAMES, CONTRACTIONS, VULGAR AND  
SCIENTIFIC DENOMINATIONS;

WITH A COPIOUS INDEX TO ALL THE PREPARATIONS.

By THOMAS F. BRANSTON.

FIRST AMERICAN,  
FROM THE SECOND LONDON EDITION.

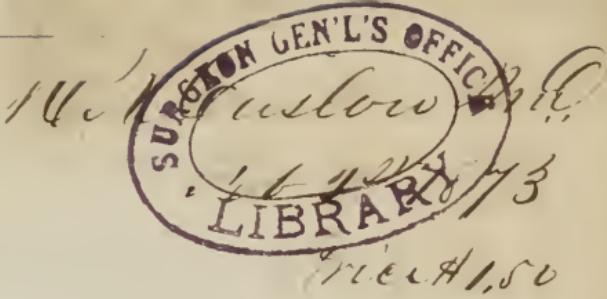


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## PREFACE

TO THE

### SECOND LONDON EDITION.

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WHEN this work first appeared, in the latter part of the year 1853, the author expressed the hope that it might prove a useful companion to those for whom it was intended. The contents had been compiled with great care; and it was gratifying to the writer to find that his work met with the approval of scientific and practical men. The editor of the "Chemist" reviewed the work in the number issued for January, 1854; and, after quoting the title, proceeds to observe—

"This is a most useful little book; its nature is sufficiently set forth in the above lengthy title; consequently, an analysis of its contents is unnecessary. The author has executed his very laborious task with much care, and has provided very fully for the wants of the class to which his work is addressed.

"The Glossary will be found very useful, especially to those who may require to refer to old works or recipes. An ample Index also constitutes a very important feature in this work.

“This hand-book will be especially valuable to the pharmaceutical chemist and medical practitioner, and very useful to most of the general publice.”

In the lapse of four years, science has made rapid advances and new discoveries, among which are included some improved processes for attaining results hitherto imperfectly obtained,—the composition of patent medicines, notes on various photographic processes, and a variety of new artistic and medical formulæ. Some of the reeipes and preparations are taken from trade formulæ, whieh now appear in print for the first time. The editor trusts that these additions will increase the value of the work, and render it still more useful to the student, and the publice generally, as a Hand-book of truly practical Reeipes of every-day use.

## ADVERTISEMENT.

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THE present work is offered to the Chemist, Druggist, and Medicinal Praetitioner, as a useful manual of reference and information. The articles are alphabetically arranged; but, as they might be placed under different heads, a copious Index of Contents is added, which will at once show on what page any particular item may be found. All preparations of the *Pharmacopœia* are marked *L.*, to denote that they are so ordered by the London College of Physicians.

To assist the Student of Medicine in reading old recipes and prescriptions, and to understand the contractions and scientific terms used in the medical art, a Glossary is compiled as an Appendix, which will greatly facilitate the understanding of those points. This will be found a new and useful feature; for, as far as the compiler is aware, there is no other Hand-book which contains this information.

It is unnecessary to point out the usefulness of a work which contains the *Pharmacopœial* preparations, combined with the miscellaneous receipts required in daily practice.

This manual is therefore offered in the hope that it will prove a useful companion to those for whom it is intended.

N. B.—Every medicine and Pharmacopœial preparation is made by using the troy standard; all domestic and trade preparations not medicinal are weighed by avoirdupois weight.

THE  
H A N D - B O O K  
OF  
P R A C T I C A L R E C E I P T S.

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ABERNETHY'S PILLS.—Each pill contains 2 grains of blue pill, and 3 grains of compound extract of colocynth.

ACETATES are formed by adding acetic acid to alkalies, metals, &c. They are used in medicine and in the arts, and will be found in this work under the heads of the bases, as ammonia, lead, morphia, potash, &c.

ACETIC ACID (P. L.) is “prepared from wood, by means of heat, and purified. It is void of colour, has a most acrid odour, specific gravity 1.048; by heat it escapes in vapour. 100 grains of this acid are saturated by 87 grains of crystallized carbonate of soda.”

*Tests.*—Nothing is thrown down by nitrate of silver or chloride of barium; if a thin silver plate be digested in it, and afterwards hydrochloric acid dropped in, nothing is precipitated. Its colour is not changed on the addition of hydrosulphuric acid, nor by ammonia, nor by ferrocyanide of potassium added after the ammonia.

The usual ways of procuring acetic acid are by decomposing dry acetate of soda, potash, or lead, by sulphuric acid; or by dry distillation of acetate of copper or lead, or decomposing acetate of lead by sulphate of iron or soda.

ACETIC EXTRACT OF SQUILLS.—Squill roots 1 lb., acetic acid, 3 oz. distilled water, 1 pint. Digest with a gentle heat for forty-eight hours, express strongly, and without

straining evaporate to a proper consistence. One grain is equal to three of the powder. Keeps well.

**ACETIMETRY.**—The strength of vinegar or acetic acid is determined by an instrument termed an acetimeter.

The excise officers add hydrate of lime to the acid until it is saturated; the clear solution of acetate of lime shows by its specific gravity the amount of acid in the tested liquor. Dr. Ure advises the addition of bicarbonate of potash to the acid until it is neutralized; each two grains of potash indicate one grain of acetic acid. Carbonate of soda, and carbonate of potash, are also used as tests; or the strength of the vinegar may be decided by taking its specific gravity, and using tables which show the proportionate percentage of acid.

**ACETIC ACID (Dilute, P. L.)**—Acetic Acid, 23 fluid drachms, distilled water, 1 pint; make the acid into one pint with the water, and mix. Sp. gr., 1.008. A fluid ounce is saturated by 57 grains of crystallized carbonate of soda.

*Acids* are of various kinds, are sour in taste, and reddens litmus paper. They will be found under their names.

—See Index.

**ACIDS FOR GALVANIC BATTERIES.**—1. *Smee's* Battery.—One part sulphuric acid to water 7 parts, by measure.

2. *Daniel's* Battery.—For the external cylinder, a saturated solution of sulphate of copper, with  $\frac{1}{5}$  part of sulphuric acid. For the inner cylinder, to act on the zinc, 1 part of sulphuric acid by measure, to 10 parts water.

3. *Groves' Battery*.—For the outer vessel, 1 part by measure of sulphuric acid to 7 parts water; for the inner vessel, concentrated nitric acid.

4. Nitric acid, 1 fluid ounce, sulphuric acid,  $1\frac{1}{2}$  fluid ounce, water, 4 pints.

5. *Wright's* Batteries.—Nitric acid, 1 part, by measure, sulphuric acid, 5 parts.

6. *Faraday's*.—Sulphuric acid, 2 fluid ounces, nitric acid, 1 fluid ounce, water, 5 pints.

ACIDIMETRY is the operation of estimating the strength of acids by means of an acidimeter. An acid is always compared by itself, as no scale has yet been discovered which serves as a criterion for the different acids. The test usually consists of alkalies, the quantity of which required to neutralize the acid determines its strength.

ACONITE, known also as *Monkshood* or *Wolfsbane*, possesses powerfully poisonous properties. The root, *Aconiti Radix*, and the leaves, *Aconiti Folium*, are the parts ordered by the London College. The officinal preparations are an extract and a tinctor, though in private practice various other preparations of it are used, as ointment, pills, plaster, &c. Its principle, *Aconitina*, is a very dangerous preparation, and is very rarely used as a medical agent.

ALABASTER. *To Clean*.—Wash with soap and warm water, rinse with cold clear water. Spots of grease may be removed with turpentine. *To Harden*.—Mix up the plaster of Paris with a solution of size or gum. *To Join*.—Use the cement of quick-lime and white of egg. It is *Polished* with pumice stone, finished with French chalk.

ALBUMEN.—The purest albumen is the white of eggs. It is used as a glaze for pastry, in cements, and to clarify wine, sugar, coffee, and syrups. It may be preserved by spreading it thinly in layers, allowing each to dry separately before adding another; it will thus keep for any length of time. For use, a portion is dissolved in cold water and beaten to a froth.

ALCOHOL.—The fermented product of saccharine vegetables, obtained pure by distillation. It is distilled finally over lime, or chloride of calcium, by which process absolute alcohol is procured. Its uses are various; as a solvent it is used for gums, resins, soaps, essential oils, camphor, and vegetable substances. In medicine it forms tinctures, and with acids various ethers: the perfumer uses it to dissolve oils, the varnish-maker to dissolve gums and resins. Its purity is known by its sp. gravity, and by tests. It should retain its colour and transparency on the addition of a solution of nitrate

of silver. Spirit, as supplied to druggists, is usually 60° over-proof. The *proof* strength is an assumed standard, sp. gr. 0.920 at 60° F., from which standard the comparative strength of all spirits are determined. When spirit is *over-proof*, it is reduced to proof by the addition of water, the quantity of which is known by the degree *o. p.* Spirit which is 10°, 20°, 40° *o. p.* requires to each 100 gallons of spirit, 10, 20, or 40 gallons of water to reduce it to proof. Under-proof spirit, as 10°, 20° *u. p.* means that 100 gallons contain 90 or 80 gallons of proof spirit, and 10 or 20 gallons of water.

**AGUE DROPS** (tasteless).—The solution of arsenite of potash (P. L.) is so called.

**ALKALIES.**—The chief are soda, potash, and ammonia, the old names of which were mineral, vegetable, and volatile alkali; soda and potash were also called fixed alkalies.—They effervesce on the addition of acids, turn vegetable blues green, and yellows brown, make soaps with the fixed oils, and salts with acids. The purity of alkalies is determined by alkalimeters, by a process the reverse of acidimetry.

**ALKALINE BATHS.**—*Medium.*—Ammonia saturated with spirits of camphor, 3 oz. salt, 2½ lbs. troy. Mix with two or three gallons of water, and add warm water.

*For Children.*—Camphorated ammonia, 2 oz., salt, 8 oz. Used in fevers, pains, liver complaints, &c.

**ALKALOIDS.**—These are derived from various plants. The chief are as follows.

Alkaloids.	Plants which yield them.
Aconitina . . .	Aconitum Napellus
Aricina . . .	Arica Bark
Atropia . . .	Atropia Belladonna
Brucia . . .	Strychnos Nux Vomica
Cinchonia . . .	Cinchona Pallida (Lancifolia)
Codeia . . .	Opium
Conia . . .	Conia Maculatum
Corydali . . .	Corydalis Tuberosa
Cynapia . . .	Æthusa Cynapium
Daturia . . .	Datura Stramonium
Delphia . . .	Delphinium Staphisagria
Digitalia . . .	Digitalis Purpurea

Einetina . .	Cephælis Ipecacuanha
Hyoscyamia .	Hyoscyamus Niger
Meconia . .	Opium
Morphia . .	Opium
Narceia . .	Opium
Narcotina. .	Opium
Nicotina . .	Nicotiana Tabacum
Picrotoxia .	Menispermum Cocalus
Quinia . .	Cinchona Flava (Cordifolia)
Sanguinaria .	Sanguinaria Canadensis
Solania . .	Solanum Nigrum
Thebaia . .	Opium
Veratria . .	Veratrum Sabadilla

**ALKANET** Root (*Anchusa Tinctoria*) gives a fine red tinge to oils, fats, wax, turpentine, spirits, essences, &c., and is used to colour hair-oil, pomatum, ointments, varnishes, &c. The spirituous solution stains marble of a deep red; wax tinged with alkanet and applied to warm marble, leaves a flesh colour.

**ALLOY.**—A mixture of two or more metals for various purposes. A rare or expensive metal is mixed with an inferior one, to reduce its cost. The chief end sought in making alloys, is to render them hard, malleable, sonorous, &c., as the case may be, or to change their colours to suit speculums and bronzes, or to imitate gold and silver.

**ALMONDS** (*Amygdalæ.*) Sweet almonds are oblong, externally of a cinnamon colour, and have a sweet pleasant taste. Used in various preparations. The bitter almond is generally compressed for the oil, the remaining cake is mostly used as a cosmetic.

**ALMOND FLAVOUR.**—To one part of essential oil of bitter almonds add 15 parts of spirits of wine. Used to flavour custards and pastry, in which it should be sparingly used, as it is a *poison*.

**ALUM** is prepared from aluminous schist, commonly called alum ore. It is used in the arts and in medicine. As a gargle it is useful in sore throat, and in lead colic it is said to prove very beneficial. Alum is valuable in dyeing in proportion to the alumina it contains. Pure

alum in solution does not change on the addition of sulphuretted hydrogen, tincture of galls, or prussiate of potash.

**ALUM, DRIED** (Alumen Exsiccatum, P. L.)—Take 1 pound of alum, let it liquefy over a fire, then increase the heat until all ebullition has ceased.

**ALUM, Compound Solution of**, P. L. (Liquor Aluminis Compositus.) Alum and sulphate of zinc, of each one ounce; rub them together, dissolve in 3 pints of distilled water, and strain.

**ALUM RUPEL**.—Alum coloured with Venitian red or Armenian bole.

**AMADOU, or German Tinder**.—Amadou is prepared from the mushrooms, *Boletus igniarius*, *Boletus fomentarius*, &c. The bark is removed, and the inner substance is beaten with wooden mallets until soft, when it is ready for use as a styptic or as a corn-protector. For tinder, it is soaked in a solution of nitre or gunpowder, and carefully dried.

**AMALGAMS** are metals mixed with quicksilver. Amalgams for Electrical Machines are made as follows.

1. Zinc and tin, of each one part, quicksilver two parts. Melt the tin and zinc, add the mercury made hot, pour the mixture into a wooden box, and shake until cold.
2. Zinc, 2 parts, tin, 1 part, quicksilver, 3 parts.
3. Zinc, 2 parts, tin, 1 part, quicksilver, 5 parts.
4. Quicksilver, 6 oz., bees wax,  $\frac{1}{2}$  oz., zinc, 2 oz., grain tin, 1 oz.

**AMALGAM OF GOLD**.—Gold one part, melt in a clean ladle, add 8 parts of mercury, and pour out the amalgam.—It is used for gilding metals, which are prepared by rubbing over them a solution of nitrate of mercury, covering thinly with the amalgam, and exposing the whole to a moderate heat, which drives off the mercury and leaves the gold. Silver amalgam is made and used in a similar manner.

**AMALGAM FOR SILVERING GLOBES**.—Pure lead, tin, bis-

muth, each 1 part, quicksilver, 10 parts. Melt the first three, remove them from the fire, and just before cooling add the quicksilver.

**AMALGAM FOR MIRRORS.**—Lead and tin, each 1 oz., bismuth, 2 oz., mercury, 4 oz., melt as before, and add the mercury. These are used to silver mirrors, glass globes, &c., by warming the glass, melting the amalgam, and applying it.

**AMALGAMS FOR THE TEETH** are preparations used to fill hollow and decayed teeth. The ablest Dentists repudiate the use of any other material than gold leaf, which is certainly the best article to employ. Other compositions are as follows.

*Mineral Succedaneum.*—(a) Gold and mercury heated in a clean ladle, applied to the tooth while still warm and of a pasty consistence.

(b) Quicksilver and tinfoil.

(c) Add powdered glass or steel filings to the last.

(d) Quicksilver, 40 grains, zinc filings, 20 grains; mix and apply.

(e) Tin, 2 parts, cadmium, 1 part, melt. Add quicksilver to some of the metal, in filings.

(f) Silver, 72 parts, tin, 20 parts, zinc, 6 parts. As before.

(g) Fine silver filings and mercury.

**AMALGAM FOR THE TEETH.**—Pure gold, 1 part, silver, 3 parts, tin, 2 parts. Melt the gold and silver, add the tin, remelt the whole, and reduce to the finest powder. For use, the requisite quantity is mixed with an equal weight of pure mercury.—*Robertson.*

**AMALGAMATED ZINC.**—Cover a little mercury in a dish with dilute sulphuric acid. Immerse the zinc plate, rub the mercury and acid over it with a linen rag, when the mercury will adhere. Or clean the plate with sulphuric acid, rinse it, dip it in a mixture of equal parts of saturated solutions of bichloride of mercury, and acetate of lead, lastly, rub the plate with a cloth. Used for voltaic batteries in electro-plating.

**AMBER** is joined by linseed or boiled oil, pressing the pieces together over a gentle fire. Amber is soluble in sulphuric acid, and the alkalies, but the solutions are useless in the arts. It is made into a useful varnish, with oil and turpentine. See Varnish.

**AMERICAN WHITEWASH.**—Slaek half a bushel of lime with boiling water, and cover the vessel to retain the steam. Strain the liquor, and add one peck of salt previously dissolved in warm water, 3 lbs. of rice boiled and ground to a paste, Spanish whiting, 8 oz., glue, 1 lb. Mix and add hot water, 5 gallons. Let stand a few days, and apply hot. It makes a brilliant wash for inside or outside work.

**AMMONIA** is readily recognised by its pungent smell. In solution (*liquor ammoniæ*) it is free from colour, and gives off acrid alkaline vapours. The weaker preparation (P. L.) contains nearly 10 grains of ammonia in 100 grains of the solution, sp. gr. 0.960. The stronger solution (*fortior*) is of sp. gr. 0.882; contains nearly 30 grains of ammonia in 100 grains of solution, and is reduced to the weaker standard by adding to one ounce of it, two ounces of water.

**AMMONIACAL SOLUTION FOR PLANTS.**—Sulphate of ammonia, 700 grains, sesqui-carbonate of ammonia, 100 grains, water, 8 fluid ounces. Dissolve. One fluid ounce of this solution is added to a gallon of water. Used for watering weak plants, shrubs, &c.

**AMMONIATED SOLUTION OF QUININE.**—Sulphate of quinine, 32 grains, proof spirit, 3½ oz., liquor of ammonia, ½ oz. Mix the quinine with the spirit, and add the ammonia, which will precipitate the quinine, and afterwards redissolve it.

**ANATOMICAL PREPARATIONS, to Preserve.**—Various fluids are used for this purpose; in some cases the articles are merely washed, in others the fluid is injected; while some articles are immersed in the solution. Creosote, spirit, and bichloride of mercury, are used to prevent

decay; solution of arsenic to preserve from attacks of insects.

1. Salt and alum, of each 2 lbs., nitre, 1 lb., water, 4 gallons. Into the carotid artery inject a solution of sulphate of alumina, of density 1.286.—*Gannal*.
2. Inject pyroxilic spirit into the aorta, the cavity of the peritoneum, and the rectum.—*Babington*.
3. *For Insects*.—Bay salt, 4 oz., alum, 2 oz., bichloride of mercury, 2 to 4 grs., water, 1 to 2 quarts.—*Goadby*.
4. Creosote, 3 to 6 drops, water, 1 pint. For pathological specimens.—*Pigne*.
5. Chloride of tin, 4 parts, or bichloride of mercury, 5 parts, in 100 parts of water, with 2 parts muriatic acid.—*Cooley*.
6. *For Animals*.—Alum, 2 lbs., nux vomica, 3 oz., water, 5 pints; boil, cool, and filter. Used to inject, and mixed with yolk of egg, to anoint externally.
7. *For Feathers of Birds*.—Strychnine, 8 grs., rectified spirit, 10 oz. Mix.
8. *For Molluscae*.—Bay salt,  $\frac{1}{2}$  oz., arsenic, 15 grs., bichloride of mercury, 1 gr., water, 1 pint.
9. Water and spirit of wine, of each 3 parts, strong ammonia, 1 part.

**ANCHOVY POWDER.**—Pound anchovies, rub the paste through a sieve, and add dry flour to make a dough. Dry and powder. Used as an ingredient in sauces.

**ANCHOVY PASTE.**—Pound the anchovies, rub the paste through a sieve, pot the fish, and cover with butter.—A little salt and pepper are used to season it.

**ANCHOVIES, ESSENCE OF.**—Pound the fish, boil the bones, &c. in a small quantity of water, add the fish to the strained liquor, with salt, pepper, and flour. Colour with powdered bole, annatto, or infusion of cochineal.

**ANNATTO** forms a colouring matter, applicable to various purposes; the best is termed roll annatto. It is soluble in ether, alcohol, volatile and fixed oils, imparting to them a brilliant orange colour; alkaline solutions darken it, sulphuric acid turns it blue.

**ANNATTO, SOLUTION OF.**—Boil one part each of annatto and pearl-ash in water. Dilute to the required colour.

**ANNATTO, PURIFIED.**—Boil pearl-ash and water; add as much annatto as it will dissolve. Oil of vitriol by weight, 1 part, water, 20 parts; mix. Gradually add this to the annatto solution, when cold, as long as a coloured precipitate is thrown down, avoiding excess of acid. Wash the precipitate and dry it. The product is pure annatto.

**ANTI-ATTRITION, or Axe Grease.**—Black lead 1 part, tallow or lard, 4 parts; ground together.

**ANTIBILIOUS PILLS.**—Aloes, 28 parts, colocynth, 12 parts, rhubarb, 7 parts, myrrh and scammony, of each 3½ parts, ipecacuanha, 3 parts, cardamom seeds, 2 parts, soft soap, 9 parts, oil of juniper, 7 parts, and treacle, q. s. Divide into 4 grain pills, of which two or three are a dose.

**ANTI-FERMENT.**—A preparation to check fermentation.

1. *Sulphite of lime.*

2. Cloves, 1 part, mustard seed, 14 parts, bruised together. A little of either is added to wine, cider, &c.

**ANTIMONY** is procured from the crude ore or sulphuret of antimony. It is brittle, white with a blue tinge, and has a crystalline fracture. Fused with borax it imparts a yellow colour to it. Dissolved in hot concentrated nitric acid, it forms a powder termed antimonious acid, which is insoluble in ordinary acids.

Sp. gr., 6.646 to 6.86. Used chiefly in medicine and in alloys.

**AQUA FLORUM NAPHÆ.**—Orange flower water.

**AQUA VEGETO-MINERALIS.**—Goulard water.

**ARCHILL,** also called turnsole, litmus, eudbear, &c. Affords a colouring matter, which is used for testing acids, alkalies, &c.—See Tests.

**ARROWROOT** (*Miranta arundinacea*)—A pure nutritive starch, the best of which comes from the tubers of the maranta plant, and is called West India or Bermuda arrowroot. Inferior descriptions are the *East Indian*,

from the *Curecuma Angustifolia*; *Brazilian*, from the Cassava plant (tapioca); *Portland*, from the *Arum Maculatum*; *South Sea, or Tuhiti*, from the *Tacca Pinnatifida*; and *English arrowroot*, or potato starch. The last is frequently used to adulterate the better sorts..

**ARROWROOT JELLY.**—1. Make a dessert-spoonful of arrowroot into a smooth jelly with cold water, add half a pint of *boiling* water, pour all into the pan and boil for a minute. Add wine, sugar, and nutmeg to taste.  
2. Use milk instead of wine and water. Nourishing for invalids and for weak bowels.

**ARSENIC** is by law required to be mixed with soot or indigo, to distinguish it more readily from innocent preparations. Arsenic may be detected by an ammoniacal solution of acetate or sulphate of copper, which turns it green. From the frequent wilful or accidental cases of poisoning which have been caused by this article, many tests have been proposed, and in suspected cases various trials are made before finally deciding. The antidotes to arsenic are emetics, and immediate medical aid.

**ARSENIOUS ACID (P. L.)**—A metallic acid, prepared by sublimation. White or slightly yellowish; when heated in a tube it sublimes; mixed with charcoal, and heated, it is reduced to metallic arsenic. Soluble in boiling water, from which it precipitates on cooling. This solution gives a yellow precipitate on the addition of hydrosulphuric acid; with ammonia and then nitrate of silver, a lemon-coloured precipitate; with potash and sulphate of copper, a green one. If 100 grains of this acid be digested in dilute hydrochloric acid, and when cool, hydrosulphuric acid be added, 124 grains of tersulphuret of arsenic are precipitated.

**ASARABACCA SNUFF.**—Prepared from asarabacca leaves, and mixed with scented snuff. See Cephalic Snuff.

**ASPHALTUM, PREPARED.**—Scio turpentine, 2 parts, asphaltum, 1 part. Melt and thin with warm oil of turpentine. Or melt one part of asphaltum, and add 2 parts of warm balsam of copaiba.

ASSES' MILK ARTIFICIAL.—1. Milk, 1 quart; rice, sugar-candy, each 1 oz., bruised eringo-root, 1 drachm. Boil together and strain.

2. Egg milk sweetened with sugar-candy.

3. Hartshorn shavings, 1 oz., water, 1 pint; boil, add sugar and milk.

ATKINSON'S INFANT'S PRESERVATIVE.—A proposed substitute consists of carbonate of magnesia, 6 drachms, sugar, 2 oz., oil of aniseed, 20 drops, sal volatile, 2½ drachms, laudanum, 1 drachm, syrup of saffron, 1 oz.; make up 1 pint with caraway water.

BACHER'S TONIC PILLS.—1. Extract of black hellebore, powdered myrrh, of each 1 oz., blessed thistle, (*carduus benedictus*), 3 oz., mix and divide into 1 grain pills.—Dose 2 to 6, three times a day.

2. Alkaline extract of black hellebore, 2 drachms, extract of myrrh, 2 drachms, blessed thistle, 1 drachm, mix and divide into 4 grain pills.

BAILEY'S ITCH OINTMENT.—Olive oil, 1 lb., suet, 1 lb., alkanet root, 2 oz. Melt until coloured, strain, add alum, nitre, sulphate of zinc, of each 3 oz., vermillion to colour, and any essential oil to perfume.

DR. BAILLIE'S PILLS.—Compound extract of colocynth, 1½ drachm, extract of aloes, 1½ drachm, Castile soap, ½ drachm, oil of cloves 15 drops. Make 38 pills—Dose, 3 at bed-time, occasionally.

DR. BAILLIE'S DINNER PILLS.—Aloes, 20 grains, ginger, ½ drachm, ipecacuanha, 8 grains. Make 16 pills with syrup q. s.—Dose, one daily before dinner.

BAKER'S ITCH, OINTMENT FOR.—1 oz. palm oil, ¼ oz. ointment of nitrate of mercury. Mix.

BAKING POWDER.—1. Bicarbonate of soda, 9 oz., tartaric acid, 8 oz., arrowroot or rice flour, 10 oz. Mix.

2. *Delfort's*.—Bicarbonate of soda, 2½ oz., bicarbonate of ammonia, ½ oz., alum, 5 oz., arrowroot, 4 oz.

BAKING POWDER.—Carbonate of soda, 56 lbs., tartaric acid, 28 lbs., potato flour, 112 lbs., turmeric, 12 oz. Mix.

**BALDWIN'S PHOSPHORUS.**—Melt nitrate of lime, keep it fused 5 or 10 minutes, and pour it into a heated ladle. Cool gradually, break the mass, and preserve in close stopped phials. After exposure to the sun it emits a bright light in the dark.

**BALLOON VARNISH.**—1. Good boiled linseed oil, allowing time to dry and harden.

2. Digest 1 lb. of Indian rubber, cut small, in 6 lbs. oil of turpentine, for 7 days, in a warm place. Put the mixture in a water bath, heat until thoroughly mixed, add 1 gallon of warm boiled drying oil, mix, and strain when cold.

**BALLS FOR HORSES.**—Various medicines rolled in soft paper, are called *balls*. The drugs should be of good quality, and recently powdered.

*Alterative Balls.*—Alterative medicines purify gradually the system without strongly affecting it. A ball may be given daily, or every other day, as required.

1. Barbadoes aloes, 10 drachms, calomel, 3 drachms, caraway, 1 oz., ginger, 3 drachms, oil of caraway, 30 drops. Mix and divide into four balls.
2. Calomel,  $\frac{1}{2}$  oz., aloes,  $1\frac{1}{2}$  oz., soft soap, 8 oz., starch, 6 oz. Divide into 12 balls.
3. Aloes, ginger, liquorice, of each 2 oz., Castile soap, 2 oz., mix with treacle, and make 4 balls.
4. Antimony, nitre, sulphur, cream of tartar, equal parts. Give a table-spoonful mixed with treacle, or in a bran mash.
5. Antimony, soap, guaiacum, of each 8 oz., camphor,  $1\frac{1}{2}$  oz. Make 16 balls.
6. Nitrate of potash, 1 oz., sulphate of antimony, sulphur, cream of tartar, of each 2 oz., resin, 3 oz., ginger, 1 oz., linseed meal, 4 oz. Make 8 balls.

*Anodyne Balls.*—Camphor, opium, oil of caraway, of each  $\frac{1}{4}$  oz., aniseed powder, 2 oz., ginger, 1 oz., Castile soap,  $1\frac{1}{2}$  oz. Mix with treacle, and make 3 balls.

*Astringent Balls*, for looseness.—1. Catechu,  $\frac{3}{4}$  oz., ginger, 1 oz., liquorice, 2 oz. Mix with soft soap, and make 3 balls.

## BALLS FOR HORSES.

2. Tormentil,  $1\frac{1}{2}$  drachm, chalk, 2 drachms, syrup to make a ball.

*Camphor Balls.*—Camphor, 1 oz., nitre, 4 oz., liquorice, 1 oz., treacle to mix for 4 balls.

*Colic Balls.*—Opium,  $\frac{1}{4}$  oz., Castile soap, camphor, each 1 oz., ginger, cassia, each  $\frac{1}{2}$  oz., liquorice powder, 2 oz. Make 4 balls, with treacle to mix.

*Cordial Balls.*—1. Aniseed, caraway seed, cummin seed, each 4 oz., ginger, 2 oz., treacle to mix. Make into 5 balls.

2. Pimento, 1 lb., barley meal, 2 lbs., treacle to mix. In 2 oz. balls.

*Cough Balls.*—1. Ipecacuanha, 1 oz., squills, camphor, oil of aniseed, of each  $\frac{1}{2}$  oz., liquorice, 16 oz., treacle to mix. Make 12 balls.

2. Squill, 1 drachm, ammoniac, 3 drachms, opium,  $\frac{1}{2}$  drachm. Make 1 ball, with syrup.

3. Liquorice, fenugreek, of each 3 oz., tar,  $1\frac{1}{2}$  oz., benzoin, oil of aniseed, of each  $\frac{1}{2}$  oz., Castile soap,  $1\frac{1}{2}$  oz. Make into 2 oz. balls.

4. Opium, camphor, squill, ginger, Castile soap, of each 1 drachm, ammonia, 3 drachms, oil of aniseed, 20 drops. Make 1 ball, with honey.

*Diaphoretic Balls.*—Tartar emetic, camphor, of each  $\frac{1}{2}$  oz., liquorice, 2 oz., treacle, q. s. for 2 balls.

*Diuretic Balls.*—1. Nitre, 1 oz., Castile soap,  $\frac{1}{2}$  oz., turpentine, 1 oz., barley meal,  $2\frac{1}{2}$  oz. Make 5 balls, with treacle.

2. Castile soap, 2 oz., resin, nitre, of each 1 oz., oil of juniper, 30 drops. Make into 3 balls.

3. Resin, 1 lb., nitrate of potash, 2 oz., carbonate of potash, 1 oz., Castile soap,  $\frac{1}{2}$  lb., oil of juniper, 1 oz., linseed meal, q. s. In  $1\frac{1}{2}$  oz. balls.

*Fancy Balls.*—1. Calomel, 1 oz., opium,  $\frac{1}{2}$  oz., liquorice, 1 oz., oil of aniseed,  $\frac{1}{2}$  drachm, treacle to make 1 ball.

2. Aloes, antimony, of each 2 oz., soft soap, q. s. In ounce balls.

3. Sulphate of zinc, 15 grains, cantharides, 7 grains, pimento, 15 grains. Make 1 ball, with treacle and oatmeal.

## BALLS FOR HORSES.

*Fever Balls.*—1. Nitre, tartar emetic, of each 1 oz., digitalis,  $\frac{1}{4}$  oz., antimonial powder,  $\frac{1}{2}$  oz., liquorice powder,  $1\frac{1}{4}$  oz., treacle to mix. Make 3 balls.

*Gripe Balls.*—Liquorice, black pepper, ginger, prepared chalk, of each 4 oz., oils of caraway, cloves, and cassia, of each 1 drachm; treacle to mix. Make 12 balls.

*Laxative Balls.*—Aloes, ginger, soft soap, of each 3 drachms, oil of caraway, 20 drops. Mix with treacle, for 1 ball.

*Mange Balls.*—Crude antimony, 2 oz., calomel, 1 oz., opium,  $\frac{1}{2}$  oz., sulphur, 1 lb.; mix with treacle, for 12 balls.—10 to 15 grains is also a good medicine for a mangy dog.

*Purging Balls.* Sec *Laxative Balls.*—Aloes, rhubarb, of each 3 drachms, subcarbonate of soda, 2 drachms, ginger,  $1\frac{1}{2}$  drachm; treacle to make 1 ball.

*Tonic or Stomach Balls.*—1. Gentian, 4 oz., ginger, 2 oz., oil of caraway, 1 drachm, soft soap, 8 oz. For 8 balls.

2. Gentian, 4 drachms, chamomile, 2 drachms, carbonate of iron, 1 drachm, ginger, 1 drachm; syrup to make 1 ball.—*Yonatt.*

3. Myrrh, 3 drachms, sulphate of iron, 2 drachms, chamomile, 3 drachms, ginger, 1 drachm; turpentine to make 1 ball.—*Blaine.*

4. Gentian, 2 oz., myrrh, sulphate of iron, of each 1 oz., liquorice powder, 4 oz. Mix with treacle, and make 8 balls.

5. Calumba, 5 oz., cascara, 3 oz., sulphate of iron,  $4\frac{1}{2}$  oz., soft soap, 8 oz. For 12 balls.

*Worm Balls.*—1. Aloes, 6 drachms, calomel, 2 drachms, oil of savine, 1 drachm, soft soap, 1 oz. Make 2 balls.

2. Aloes, tin filings, ginger, soft soap, of each  $\frac{1}{2}$  oz., oil of cloves, 15 drops. Make 1 ball.

**BALLS** for non-medical purposes.—All the preceding are horse medicines; the following are intended for other uses.

**BALLS** for Scouring Clothes, &c.—1. Fuller's earth, 2 lbs., soap, 1 lb., turpentine, 2 oz., ox gall enough to make a paste.

2. Fuller's earth, whiting, and pipe clay, equal parts, ox gall enough to make a paste. These are used to remove grease from cloth, or stains from clothes.

**BALLS, CAMPHOR**, for chapped hands, &c.—1. Spermaceti, white wax, each  $\frac{1}{2}$  oz., almond oil, 1 oz., alkanet, to colour. Melt, strain, and add 3 draehms of powdered camphor.

2. Lard, wax, and almond or olive oil, equal parts, with a little powdered camphor. Used to rub over the hands after washing, to prevent chaps.

**BALLS, FURNITURE.**—Melt 1 lb. of bees wax, and 2 oz., resin, with  $\frac{1}{2}$  oz., of alkanet root, add linseed oil and spirit of turpentine, of each 5 fluid ouncees. Strain, and when setting, make balls. Used to polish furniture.

**BALLS, HEEL.**—1. Mutton suet, 4 oz., bees'-wax, 1 oz., sweet oil, 1 oz., oil of turpentine,  $\frac{1}{2}$  oz., melt and add gum Arabic, 1 oz., lamp black,  $\frac{1}{2}$  oz.

2. Bees'-wax, 8 oz., tallow, 1 oz., melt and add powdered gum Arabic, 1 oz., lamp black to colour. Used by shoemakers, and to copy inscriptions, or raised patterns, by laying paper on the pattern and rubbing the ball on it.

**BALLS, WASH.**—1. Soap, 1 lb., starch in powder, 3 oz., beat together and roll into balls.

2. Add a little esseuee of lemon, or rose water, to the last.

3. *Coloured.*—Roll the balls in bole for *red*; in powdered blue for *blue*; in a mixture of blue and yellow ochre for *green*, &c.

4. *Camphorated.*—Add a little tincture of camphor, or powdered camphor, to No. 1.

**BALSAM OF HONEY.**—1. Balsam of tolu, 2 oz., storax, opium, of each  $\frac{1}{2}$  oz., honey 8 oz., spirit of wine, 32 fluid

ounces. Digest 10 days. Used in coughs, in doses of one to two tea-spoonfuls.

2. *Campbell's.*—Acetate of morphia, 1 grain; aromatic sulphuric acid, wine of ipecacuanha, antimonial wine, of each 1 drachm; powdered squills, 10 grains, syrup of poppies, 2 drachms, honey, 1 oz. Mix. For coughs, &c.—dose, one tea-spoonful three times a day, or when the cough is troublesome.

**BANDOLINE, OR FIXATEUR.**—A compound for stiffening the hair.

1. Irish or Iceland moss, boiled in water, and the strained liquid perfumed.
2. Quince seed,  $\frac{1}{2}$  teaspoonful, linseed, 1 tablespoonful, and a pinch of white mustard seed. Boil in a pint of soft water to half, and scent with oil of almonds.
3. Boil a tablespoonful of linseed, for 5 minutes, in half a pint of water.
4. Isinglass,  $1\frac{1}{2}$  oz., water, 1 pint, proof spirit, 2 fluid ounces. Dissolve the isinglass in the water, by heat, add the spirit, and scent with almond oil.
5. Tragacanth, 1 oz., rose water, 1 pint. Bruise the gum, digest for 3 days, and strain.

Any of these may be coloured with cochineal, if required.

**BANDOLINE (Rose.)**—Tragacanth, 6 oz., rose water, 1 gallon. Mix, and, after standing two days, strain and add otto of roses to scent. May be coloured with bloom of roses.

**Almond.**—Substitute otto of almonds for the otto of roses.

**BARCLAY'S ANTIBILIOUS PILLS.**—Extract of colocynth, 2 drachms, extract of jalap, 1 drachm, almond soap,  $1\frac{1}{2}$  drachms, gum guaiacum, 3 drachms, emetic tartar, 8 grains, oils of juniper, caraway, and rosemary, each 4 drops, syrup, q. s, for 64 pills.

**BAREGE WATER.**—1. *Napoleon's Bath*; alum, chalk, hard soap, each 2 grains, salt, 4 grains, carbonate of soda, 20 grains, sulphuret of potassium, 16 grains. Boil in

1 quart of water until gas is evolved, add water to make up one gallon. Used for a bath in eruptive diseases.

2. Hydrosulphate of soda, carbonate of soda, and salt, of each 20 grains, water, 1 gallon. Take internally in pint draughts.
3. Ingredients same as last, of each 2 oz., dissolve in a little water. Add to it sufficient water for a bath.

**BASILICON, BLACK.**—Yellow wax, 1 lb., black resin, and olive, or linseed oil, of each 2 lbs., melt and strain. Similar to the resin cerate (P. L.)

**BASTER'S FARINA.**—A compound of wheat-flour and sugar.

**BATES'S EYE-WATER.**—Sulphate of copper, 15 grains, camphor, 4 grains, boiling water, 4 ounces. Mix, strain, and when cold make up to 4 pints with water.

**BATES'S ANODYNE BALSAM.**—1. Soap liniment, 3 oz., laudanum, 1 oz. Mix.

2. Castile soap, 3 oz., camphor, 2 oz., opium,  $\frac{1}{2}$  oz., saffron and oil of rosemary, of each 1 drachm, rectified spirit, 20 oz. Bruise the solids, and digest all for 10 days. Used as a liniment for sprains, &c.; and internally as an anodyne.

**BATEMAN'S PECTORAL DROPS.**—1. Paregoric, 10 oz., tincture of castor, 4 oz., laudanum, 1 oz., tincture of saffron,  $\frac{1}{2}$  oz., oil of aniseed, 15 drops. Mix. Dose, one teaspoonful in coughs or colds.

2. Proof spirit, 4 gallons, sanders, 2 oz.; digest 24 hours; filter, and add opium, camphor and catechu, of each 2 oz., oil of aniseed, 4 drachms. Digest for 10 days.

**BATEMAN'S ITCH OINTMENT.**—Carbonate of potash, 1 oz., red sulphuret of mercury,  $\frac{1}{4}$  oz., lard and sulphur, of each 22 oz., bergamotte, 60 drops, rose-water, 2 oz. Mix the powders with a portion of the lard, add the remainder gradually, and finally the rose-water.

**BATHS.**—Baths may be divided into the following classes.  
1, Air Baths; 2, Water Baths; 3, Medicated Baths;  
4, Vapour Baths.

1. *Air baths* are taken *cold*, by simply exposing the naked body for a short time; and *hot*, by having heated air introduced into the apartment until the patient perspires.
2. *Water Baths, (Cold)* (a) Use a shower bath—(b) dash water over the body—(c) let it fall in a continuous stream—(d) enter into a quantity of water sufficient to immerse the whole body—(e) sponge cold water over the skin. (*Tepid*) The temperature of the water ranges from 85° to 92° F.—the body is immersed in it. (*Warm*) Temperature from 92° to 100°; used as last. (*Hot*) Used at first moderately heated; fresh hot water is added, as the patient can bear it, from time to time. Applied to the feet and legs, this bath forms a domestic remedy for colds.
3. *Medicated Baths*.—These consist of various substances mixed with water, giving it the effect of a medicine. Sulphur, mercury, and their compounds, as sulphuret of potassium, iodide of mercury or sulphur, &c., are used in syphilis and skin diseases. Chalybeate baths are employed as tonics; acid, and alkaline baths are also used for specific purposes. *Nitro-muriatic Bath*.—Mix 3 oz. of muriatic with 2 oz. of nitric acid, and 5 oz. of distilled water. Add 3 oz. of this mixture to every gallon of water in the bath. If too strong, add more water to the bath. Used for hepatic affections. *Sulphur Bath*.—Add 1 oz. sulphuret of potassium, to each 8 gallons of water, in warm bath. By adding 4 oz. glue to each 8 gallons of water, in this last bath, it forms an imitation of the Bæuge waters.
4. *Vapour Baths*.—These are plain, or medicated. The different temperatures are *tepid*, 90° to 100°; *warm*, 100° to 112°; *hot*, from 110° to 130°, or, when the vapour is not inhaled, to 160°, or as hot as the patient can bear. The hot vapour bath produces copious perspiration, especially when aided by warm drinks; it relieves stiffness, or pain in the limbs, colds, rheumatism, &c., more speedily than any other known agent. After it the skin should always be quickly sponged with cold water, and wiped thoroughly dry with a moderately coarse towel. *Medicated vapour baths* con-

sist of the vapours of sulphur, herbs, &c., in combination with steam. The sulphur Vapour-bath is considered more active than the sulphur water-bath.

*Chemical Baths*, are used to prevent the injury which might arise from too great heat. The vessel containing the substance to be warmed is placed in a liquid termed a bath. This may consist of water, which, in boiling, communicates a heat of 200° to 206°, or salt and water, which raises the heat to 212°, and by adding chloride of lime a still greater heat may be attained. Sand, fusible metal, the vapours of steam, &c., are also used to surround chemical vessels.

**BATH DIGESTIVE PILLS.**—Rhubarb, 2 oz., ipecacuanha,  $\frac{1}{2}$  oz., cayenne,  $\frac{1}{4}$  oz., soap,  $\frac{1}{2}$  oz., ginger,  $\frac{1}{4}$  oz., gamboge,  $\frac{1}{4}$  oz.; divide into 4 grain pills.

**BATH PIPE OR LOZENGES**—White sugar, 1 lb., extract of liquorice, 2 oz., gum Arabic, 1 oz. Dissolve in warm water, and roll into pipes.

**BATH PIPE.**—Sugar 4 lbs., Italian juice, 4 oz., dissolved in as little water as possible, powdered gum, 2 oz., mixed in until stiff.

**BATTERY.**—A galvanic or voltaic apparatus. Those best known are Daniell's and Smee's; besides which there are many others, as Wollaston's, Grove's, Wright's, &c. By chemical decomposition these batteries throw down metals from their solutions, decompose water, and communicate a shock to the human body. They also act in other ways, and are hence employed in scientific researches and demonstrations. They all require chemical solutions to evolve the electric current. The mixed acids most commonly used for this purpose will be found under the head of acids.

**BAUME DE VIE.**—1. Aloes, 9 drachms; gentian, rhubarb, zedoary, saffron, theriae, agarie, of each 1 drachm; proof spirit, 2 pints. Simplified thus:

2. Aloes and saffron, of each 2 drachms, rhubarb, 6 drachms, liquorice root, 1 oz., proof spirit, 8 oz. Digest for a week, and filter.

**BAUME DE VIE.**—Compound tincture of aloes.

**BAYNTON'S PLASTER.**—Litharge plaster, 16 oz., yellow resin, 6 drachms; mix and spread on calico.

**BEDDOES' PILLS.**—Dried carbonate of soda, 1 drachm, soap, 4 scruples, oil of juniper, 10 drops, syrup of ginger, q. s. for 30 pills. Used in cases of gravel or stone.

**BEEF TEA.**—1. (*Liebig.*) 1 lb. lean beef minced very small; mix with its own weight of cold water; heat gradually to the boiling point, and when it has boiled a minute or two, strain. The tea may be salted or flavoured to taste, and coloured with roast onion or burnt sugar.

2. (*Seymour.*) 2½ lbs. lean beef, minced small, cold water, 3 pints. Heat gradually without boiling, simmer to one-half, and strain.

3. *Beef Gravy.*—Divide lean meat into moderate-sized pieces, and place them in any convenient cup or vessel. Place this vessel in a pan of water, and let the water continue boiling until the beef parts with its gravy, which may be flavoured for use with a little salt and pepper.

**Uses.**—All are used to afford nourishment to invalids or children, and to those troubled with symptoms of indigestion after using solid meat.

**BEER.**—A name given to various drinks:—

*Ginger Beer.*—1. Lump sugar 1 lb., bruised ginger, 1 oz., cream of tartar, ¼ oz., a lemon sliced, boiling water, 1 gallon. Mix, and when lukewarm add 2 oz. yeast; work from 2 to 4 days, skim the liquor, strain, and bottle it.

2. Boil 22 oz. of bruised ginger in 3 gallons of water, for 30 minutes; add 20 lbs. white sugar, 18 oz. lemon juice, 1 lb. honey, and 15 gallons of water. When cold, add ½ oz. essence of lemon and the white of one egg. Let it stand four days, and bottle.

Various other receipts for ginger-beer are published, varying slightly in the quantity of ingredients, with or without the addition of lemons, isinglass, brandy, &c.

Where cheapness is the object in view, loaf sugar is dispensed with, and brown used instead.

*Spruce-Beer.*—Warm water, 10 gallons, essence of spruce, 4 oz., sugar or treacle, 8 lbs., mix, add half a pint of yeast, and proceed as for ginger-beer.

*Treacle Beer.*—Treacle, 7 lbs., hops, 12 oz., water, 18 gallons, yeast, 8 oz. Boil the water and hops, add the treacle, strain, and when cool ferment with yeast.

All these beverages are intended for immediate use, as they will not long keep good. They are chiefly used as summer drinks.

**BEETLES.**—The *blatta* or cockroach is often termed beetle. To get rid of them, various plans are resorted to. 1. Lay wafers composed of red-lead, flour, and sugar, equal parts. 2. Mix arsenic solution with honey, boiled potatoes, bread, or treacle.—This is a sure remedy. 3. Put unslacked lime in their holes or on the floor, or use powdered hellebore similarly. 4. Mix a little treacle with water or beer in a deep dish, place two or three sticks at the sides, and the beetles will walk into the mixture; use boiling water to destroy them. To prevent their appearance, get the floor laid on cinders from any foundry, instead of on common mortar only. Do not throw water into the ash-pit under the fire, as this greatly encourages them.

**BENZOL or BENZINE.**—Procured from benzoic acid and slackened lime, or from light coal naphtha by distillation. A solvent of gutta-percha and india-rubber.

**BETTON'S BRITISH OILS.**—Oil of rosemary, 1 part, tar, 8 parts, oil of turpentine, 16 parts. Mix. Used as a liniment for cattle.

**BICE.**—Blue is prepared by grinding the native blue carbonate of copper, and green, by similarly preparing the green carbonate of copper. Used as pigments.

**BIRD-LIME.**—Prepared by boiling the middle bark of the holly-tree for some hours, exposing the product for 14 days, and beating it into a pulp. Used to spread

on twigs and trees, to catch birds. May be removed from the hands, &c., by turpentine.

**BISCUITS, APERIENT.**—Mix 1 oz. of jalap in powder with each pound of paste, and bake.

**BISMUTH.**—A metal of a grayish colour, brittle, fusible at  $476^{\circ}$  F.; sp. gr. about 9.8; soluble in nitric acid.

**BISMUTH, NITRATE OF (P. L.)**—Bismuth, 1 oz., nitric acid,  $1\frac{1}{2}$  oz., distilled water, 3 pints. Mix one ounce of the water with the acid, add the bismuth, and dissolve by heat, add the water, strain, wash the powder with distilled water, and dry it. Used in medicine, and as a cosmetic. As a medicine, the dose is from five to ten grains internally, or externally as an ointment, 1 part to 4 parts lard, in chronic skin diseases.

**BISULPHURET OR BISULPHIDE OF CARBON.**—Prepared from heated charcoal and sulphur. A transparent colourless liquid, density 1.272, boils at  $110^{\circ}$  F. A good solvent of sulphur and phosphorus, and used also as a solvent of india-rubber and gutta-percha.

**BISTER.**—A dark brown coloured pigment, prepared from the soot of beech-wood or peat.

**BLACK BRUNSWICK.**—Melt by heat 2 lbs. asphaltum, add 1 pint hot boiled oil, cool, and add 2 quarts of oil of turpentine. Used to black grates and iron-work.

**BLACK DRAUGHT.**—The compound infusion of senna, with manna and tincture of senna added.

**BLACK DROP.**—A substitute for tincture of opium. Opium 8 oz., verjuice, 48 oz., a nutmeg grated, saffron  $\frac{1}{4}$  oz., mix by heat, add sugar 4 oz., yeast, 1 oz. Ferment the whole for two months, decant and filter.

**BLACKING for Harness.**—1. Melt together 8 oz. bees'-wax and one oz. oil of turpentine, add 2 oz. ivory black, 1 oz. Prussian blue, and  $\frac{1}{4}$  oz. copal varnish. Apply with a brush, and polish with a duster.

2. Isinglass or gelatine, and indigo, of each  $\frac{1}{4}$  oz., log-

wood, 4 oz., soft soap, 2 oz., gluc, 4 oz., vinegar 1 pint.  
Mix by heat, and strain.

*For Dress Shoes.*—Gum, 1 oz., lump sugar,  $\frac{1}{2}$  oz., ivory black,  $\frac{1}{2}$  oz., water, a sufficient quantity. Dissolve the gum and sugar, grind the black finely with the solution, and apply to the leather with a sponge. No polishing is required.

*For Boots or Shoes.*—1. *Paste.* Ivory black, 1 lb., treacle, 12 oz., sulphuric acid, 1 oz., sweet oil, 2 oz. Mix the black and treacle well, add the oil, then, by degrees, the acid, and as much water as may be required.

2. Ivory black, 20 oz., treacle, 16 oz., linseed oil 5 oz., sulphuric acid, 3 oz., indigo, 2 drachms, mucilage,  $\frac{1}{2}$  oz. Mix as before.

*Liquid.*—Prepared as paste blacking, afterwards adding vinegar or sour beer sufficient to render it ready for use. For liquid blacking the ingredients are required to be finely divided, and are best mixed by passing through a paint-mill. On the large scale these particulars are minutely attended to, and hence the superiority of the products. A small portion of blue improves the appearance of all blackings, and should be added where effect is desired.

**BLACK JAPAN.**—1. Asphaltum, 3 oz., boiled oil, 4 quarts, burnt umber, 8 oz. Mix by heat, and when cooling thin with turpentine.

2. Amber, 12 oz., asphaltum, 2 oz.; fuse by heat, add boiled oil, half a pint, rosin, 2 oz.; when cooling add 16 oz. oil of turpentine. Both are used to varnish metals.

**BLACK REVIVER.**—Galls, 4 oz., logwood, copperas, iron filings, of each 1 oz., vinegar, 1 quart. Mix by heat, strain, and when cool add 1 oz. ox gall. Used to restore the colour of faded black cloth.

**BLADDERS, PREPARED.**—Cut off the loose fat, wash in a weak solution of chloride of lime, and rinse in clear water. When drying, blow them tight and keep them

expanded. Used to tie over jars, pots, &c., and to contain powdered pigments.

**BLANC DE FARD.**—Subnitrate of bismuth.

**BLANC DE FRANÇAIS.**—Powdered talc.

**BLANC DE PERLE.**—Oxide of bismuth. Cosmetic.

**BLEACHING.**—The practice of decolouring various fabrics or substances, chiefly by the aids of soap and water, chloride of lime, the vapour of sulphur, and oxalic acid. After undergoing any of these chemical operations, the article is generally rinsed in cold water, and exposed to the open air to complete the process.

**BLISTER, EXTEMPORANEOUS.**—Dip a piece of lint into vinegar of cantharides or strong acetic acid, apply to the skin, and cover with cloth, bladder, or piline, to prevent evaporation.

**BLISTER, LIQUID.**—Powdered Spanish flies, 1 oz., rectified spirit, liquor ammonia, of each 2 oz.; mix, digest, and strain. Used for horses and cattle.

**BLISTERING TISSUE.**—A solution of cantharides is made in alcohol, acetic acid, or ether, strained and evaporated to an extract, which is then mixed with twice its weight of wax, and spread on silk or thin paper.

**BLOOM, ALMOND.**—Boil 1 oz. Brazil wood in 3 pints of water for 15 minutes, strain, add  $\frac{3}{4}$  oz. of isinglass,  $\frac{1}{4}$  oz. cochineal, 1 oz. alum, and  $\frac{1}{2}$  oz. borax; dissolve by heat, and strain. Used as a cosmetic for the face.

**BLOOM OF ROSES.**—Strong solution of ammonia,  $\frac{1}{2}$  oz., carmine, 2 drachms. Mix, and after standing two days, add rose water, 1 pint, triple extract of roses,  $\frac{1}{2}$  oz. Used as a cosmetic.

**BLUE, CHEMIC.**—The sulphate of indigo used in dyeing.

**BLUE FIRE.**—Nitre, 5 parts, sulphur, 2 parts, metallic antimony, 1 part.

**BLUE INK TO TURN BLACK.**—Prussiate of potash, 12 oz.,

bichromate of potash, 1 oz. Mix in hot water, 1 pint. Add tineture of muriate of iron, 4 oz., and water, 2 quarts. The product is a blue ink. To cause it to change to a black, add copperas, 2 oz.

**BLUE, LIQUID.**—To 1 part of *pure* Prussian blue, add by degrees, 2 parts of concentrated hydrochloric acid, and leave the paste for 24 hours, then add 9 parts of water and bottle it. Used to colour maps and prints.

**BLUE STONE.**—Indigo, mixed with starch or whiting, and size, and made into balls. Used by washerwomen, to give a blue tinge to muslins and linens.

**BOARDS, TO CLEAN.**—Use a paste of soft soap, pearl ash, and fuller's earth, cover the grease, and next day scour off with suds.

**BOERIAAVE'S ODONTALGIC.**—Tineture of opium, 1 oz., eamphor,  $\frac{1}{2}$  oz., dissolve, and add oil of cloves, 1 drachm. Used to relieve toothache.

**BOOKBINDERS' STAINS FOR LEATHER.**—*Black*, sulphate of iron (copperas) 1 part, water 6 parts. *Blue*, the diluted sulphate of indigo. *Brown*, a solution of soda or pearlash.

**BOOT POWDER.**—French chalk or Venitian tale, powdered. Applied to the heels of new boots, to facilitate the trying them on.

**BOOT-TOP LIQUID.**—Mix in a phial 1 drachm of chlorate of potash with two ounces of distilled water, and when the salt is dissolved add 2 oz. of hydrochloric acid. In another phial mix 3 oz. rectified spirit with  $\frac{1}{2}$  oz. essenece of lemon, mix the two solutions and bottle for use. Used to clean white boot-tops, by sponging them, and when dry polishing with a brush.

**BOOTS, TO WATERPROOF.**—Boiled oil, 1 pint, bees' wax, rosin, turpentine, each 3 oz., melt the solids, add the oil, and when cool, the turpentine. Used to prevent damp feet, by soaking new boot soles, and allowing them to become thoroughly dry.

BOOTH'S AXLE-GREASE.—1. Water, 1 gallon, soda,  $\frac{1}{2}$  lb., palm oil, 10 lbs.; mix by heat, and stir till nearly cold.

2. Water, rape oil, of each 1 gallon, soda,  $\frac{1}{2}$  lb., palm oil,  $\frac{1}{4}$  lb.

BORAX, GLASS OF.—Melt borax until fused. Used as a blowpipe flux, and in soldering.

BOUGIE.—An instrument used to overcome strictures in the rectum or urethra. They are prepared in various ways, the object being to make them firm, yet elastic. Inferior kinds are made by dipping soft linen into lead-plaster, and rolling them while warm on a smooth slab. A superior kind is thus prepared; fusc 7 oz. amber, add 21 oz. boiled oil, and 1 oz. india-rubber; mix. Add 7 oz. oil of turpentine, and spread the mixture on web or silk eord. Repeat the process until the instrument is of the size required, then polish first with pumice-stone and afterwards with tri-poli and oil.

BOUQUET DE LA REINE.—1. Otto of roses, oil of pimento, essence of bergamot, of each 40 drops, musk, 10 grains, oil of neroli, 4 drops, oil of eedrat, 40 drops.

2. Lavender water, 4 oz., orange-flower water, 20 drachms, rectified spirit,  $7\frac{1}{2}$  oz. Mix the oils in the spirit, add the musk and the waters; digest 14 days and filter. Fragrant.

BRANDISH'S ALKALINE SOLUTION.—American pearl-ash, 6 lbs., quicklime, 2 lbs., wood-ash, 2 lbs., boiling water, 5 gallons. Slake the lime, add the water, and the pearl-ash, and stir in the wood-ashes. In 24 hours, decant, add one drop of juniper oil to each pint, and bottle in green glass. Used as a tonic antacid.

BRASS.—An alloy of copper and zinc. These metals mix in any proportion, but generally some old brass is added to the new before casting. A considerable loss occurs from an unavoidable waste of zinc, by the heat required to melt the copper. It is now usual to thrust the pieces

of zinc beneath the surface of the melted copper with a pair of tongs, taking care to warm the zinc, to *dry* it, as any moisture would violently drive the copper out of the pot.

1. 6 oz. zinc to 16 oz. copper, makes a good brass, that bears soldering well.
2. 8 oz. zinc to 16 oz. copper, is ordinary brass, softer than the former.

The ordinary range of good yellow brass, that files and turns well, contains  $4\frac{1}{2}$  to 9 oz. zinc for every pound of copper. With additional zinc, it is harder and more crystalline; with less, more tenacious, and hangs to the file like copper.

**BRASS, To CLEAN.**—1. Rub over it tripoli, brick-dust, or rotten stone, with sweet oil, and polish with leather.

2. Use a solution of oxalic acid, or of roche-alum boiled in water.
3. Sulphuric or hydrochloric acids will clean brass, but it speedily tarnishes again.

**BRAZIL PAPER.**—Dip paper in a strong decoction of Brazil-wood, and dry it. Used as a test-paper; turns yellow by acids, and purple or violet by alkalies.

**BREAD, UNFERMENTED**, is made by adding to the flour, carbonate of soda, and tartaric or hydrochloric acid, in such proportions that they raise the loaf as yeast would.—This plan is not generally followed; the preference being given to good yeast. The mixed powders are vended under the name of Baking-Powders.

**BREATH, STINKING.**—It often arises from carious teeth and foul stomach. In the latter case aperient medicine is requisite; for bad teeth, a brush and a weak solution of chloride of lime is useful. Any tiniture or powder for the teeth will prove useful, if regularly applied.

**BRINE FOR MEAT.**—Brown sugar, 1 lb., bay salt, and common salt, of each 3 lbs., saltpetre, 8 oz., water, 1 gallon. Boil, scum, and when cool it is ready for use.

**BRITISH GUM, OR DEXTRINE.**—Dry potato-starch heated

from  $300^{\circ}$  to  $600^{\circ}$  until it becomes brown, soluble in cold water, and ceases to turn blue with iodine. Used by calico printers and others, instead of gum Arabic.

**BRONZE, To.**—1. Small figures are covered with size or varnish, and when this is *nearly dry*, any bronze powder is dusted on it. When dry and hard, the superfluous powder is removed, and the figure is varnished.

2. Iron is first cleaned, and then dipped into a strong solution of sulphate of copper.
3. Paper is bronzed by mixing the bronze powder with gum-water, applying it to the surface, and when dry burnishing it.

**BRONZE.**—An alloy chiefly of copper and tin, with occasionally minute additions of other metals. Used to cast statues, to make medals, and for various other purposes. The appearance of bronze may be given, by various means, to medals, plaster casts, &c.

**BRONZE FOR MEDALS.**—Clean the medal thoroughly, apply a paste of crocus powder and water, and brush it on the surface. When dry, expose it to a heat for a minute; when cool, polish with a brush.

**BRONZE POWDER, Gold.**—1. Dutch-metal or gold leaf, ground to impalpable powder.

2. Dissolve gold in nitro-muriatic acid, and precipitate it with a solution of pure protosulphate of iron; wash and dry the powder.
3. Grind gold leaf with honey to an impalpable powder, wash away the honey, and dry the powder.
4. Triturate gold leaf with crystallized sulphate of potassa, and wash out the salt with boiling water.

**Silver.**—Melt  $\frac{1}{2}$  oz. each of grain tin and bismuth in a crucible, then add  $\frac{1}{2}$  oz. quicksilver, and powder when cold. Bronzes are used in painting and gilding.

**BRONZING LIQUIDS, for Electrotyping Copper Medals.**—1. Crocus, or plumbago and water, made into a paste. Clean the medal, apply the paste, and expose to the

heat of a clear fire for a minute. When cool, polish with a brush.

2. A solution of liver of sulphur, or sulphuret of potassium.
3. Boil carbonate of ammonia, 2 oz., and acetate of copper, 1 oz., in half a pint of vinegar, until the vinegar is nearly evaporated. Add to this half a pint of vinegar, in which is dissolved 62 grains of sal ammoniae, and 16 grains of oxalic acid; boil the whole, and filter. Clean and warm the medal, apply the liquid with a camel-hair pencil, then pour boiling water on the medal, wipe it with cotton wool and a little linseed oil, polish with clean cotton.
4. Verdigris, 2 oz., sal ammoniae, 1 oz., vinegar, 1 pint. Boil, dip the clean medal for an instant or two in the boiling mixture, wash it with hot water, and dry.
5. Sal ammoniae, 1 oz., salt, 6 oz., cream of tartar, 3 oz., hot water, 1 pint. Dissolve. Add 2 oz. nitrate of copper, in half a pint of water. Mix, and apply with a brush, allowing the solution to dry on the medal.

**BRONZING TIN CASTINGS.**—When clean, wash them with a mixture of 1 part each sulphate of iron and sulphate of copper, in 20 parts water; dry, and again wash with distilled vinegar, 11 parts, verdigris, 4 parts. When dry, polish with coleothea.

**BROWNING.**—Melt 4 oz. sugar with 1 oz. butter, until the whole is brown. Stir, and add 1 pint of port wine. Pour when cool to  $\frac{1}{4}$  pint of mushroom ketchup, add  $\frac{1}{2}$  oz. each bruised pimento and black pepper, 6 cut shallots, a little mace, and grated lemon-peel. Digest a week, strain, and preserve. Used to brown and flavour gravies or soups.

**BROWNING for Gun Barrels.**—1. Aquafortis and nitric ether, of each 1 oz., sulphate of copper, 4 oz., tincture of sesquichloride of iron, 2 oz., water, 3 oz.; mix. Apply once or twice to the clean barrel, and when dry, polish with a brush, or varnish.

2. Sulphate of copper, nitric ether, each 1 oz., water, 1 pint. Mix, and digest for a week.

- 3 Nitric ether, 3 oz., gum benzoin, 1½ oz., tincture of sesquichloride of iron, ½ oz., sulphate of copper, 2 drachms, rectified spirit, ½ oz. Mix, and add 1 quart water.
4. Nitric ether and tincture of sesquichloride of iron, of each ½ oz., sulphate of copper, 2 scruples, water, 10 oz.

All the above may be varnished, with shellac, 1 oz., dragon's blood, 2 drachms, rectified spirit, 1 quart. Dissolve, filter, and apply.

**BUGS.**—When bugs have obtained a lodgement in walls or timber, the surest mode of overcoming the nuisance is to putty up every hole that is moderately large, and oil-paint the whole wall or timber. In bed-furniture, a mixture of soft soap with snuff, or arsenic, is useful to fill up the holes where the bolts or fastenings are fixed, &c. French-polish may be applied to smoother parts of the wood.

**BUG POISON.**—1. Bichloride of mercury and hydrochloric acid, of each 1 oz., water, 4 oz. Mix; add turpentine, and strong decoction of tobacco, of each 15 oz.

2. Turpentine, 4 oz., camphor, ½ oz., creosote, 20 drops. Mix.

3. *For Floors.*—Bichloride of mercury, sal ammoniae, each 4 oz., hot water, 2 gallons. Used to wash boarded floors.

**BURNETT'S, SIR W., DISINFECTING FLUID.**—Zinc dissolved in hydrochloric acid.

**BUTTER, TO PRESERVE.**—Melt it in an earthen vessel surrounded with warm water. Skim the butter until clear, and pour the pure portion off into pots, which should be filled to the top, and closely covered. A little salt may be added before pouring, and should be stirred in, afterwards allowing the butter to clear.

Or mix 2 ounces of salt with 1 oz. each of saltpetre and white sugar. Add 1 oz. of this mixture, in fine powder, to each pound of butter, working it well in. The butter must not be used for a month; and the pots containing it must be filled to the brim.

**BUTYRATE OF ETHYLOXIDE.**—Butyric ether.

**BUTYRIC ETHER.**—Artificial essence of pine apple.

**CABBAGE PAPER.**—Evaporate a strong clear infusion of red cabbage leaves, until it tinges paper gray, then dip unsized papers into it, and dry them. Used as delicate tests. Acids change it to a red, alkalies to a green colour. When changed to green by an alkali, carbonic acid will restore its gray colour.

**CACHOU AROMATISE.**—1. Extract of liquorice, 3 oz., oil of cloves, 40 drops, oil of cassia, 10 drops. Mix; divide into one grain pills, and silver them.

2. Extract of liquorice, 3 oz., vanilla and sugar, of each 1 oz., oil of peppermint, 30 drops, mucilage, q. s. Mix. Used to chew after smoking.

**CADET'S TOOTH-POWDER.**—Loaf-sugar and charcoal, of each 1 oz., Peruvian bark,  $\frac{1}{2}$  oz., cream of tartar, 1 drachm, cinnamon, 24 grains, oil of cloves, 20 drops; mix.

**CAMPHINE.**—Highly rectified oil of turpentine.

**CAMPHOR.**—A light whitish solid, having a peculiar odour, soluble in alcohol, ether, and oils. It imparts its scent and taste to water, and strongly so if the water is carbonated, or if the camphor is first triturated with gum, sugar, yolk of egg, or magnesia. Milk dissolves one-eighth of its weight by trituration, and does not deposit it on the addition of water. Camphor is imitated artificially by passing hydrochloric acid gas into oil of turpentine.

Camphor is used to scent clothes, to render copal more soluble, and to assist in certain pyrotechnic effects. It enters into several medicinal preparations.

**CAMPHOR, to Powder.**—Break the lumps with a pestle, add a few drops of rectified spirit, and triturate to powder. Used in tooth-powder, and in compound powders.

**CAMPHOR BALLS.**—1. White wax and spermaceti, of each

3 drachms, almond oil,  $\frac{1}{2}$  oz., powdered camphor, 2 drachms. Melt the solids, add the oil, and sprinkle in the camphor; colour, if desired, with alkanet-root.

2. Lard and white wax, of each 1 oz., camphor, 1 drachm. Used to anoint the hands after washing, to prevent chapping.
3. Melt together spermaceti, 3 drachms, white wax, 4 drachms, and almond oil, 1 ounce, then stir in 3 drachms of powdered camphor.

**CAMPHOR, SIR J. MURRAY'S FLUID.**—Camphor and carbonate of magnesia, dissolved by pressure in carbonated water.

**CAMPHOR CERATE.**—Fresh hog's lard,  $3\frac{1}{2}$  oz., grated camphor, 1 oz. Dissolve the lard by boiling water round a cup, then gradually add the camphor; stir well; and when cooling, pour off the sediment.

**CAMPHOR ICE.**—Melt spermaceti, 1 drachm, with almond oil, 1 oz., and add powdered camphor, 1 drachm.

**CAMPHOR JULEP, (CONCENTRATED.)**—Camphor, 1 oz., rectified spirit, by weight, 10 oz.; mix. Twenty drops to 1 oz. of water make the ordinary camphor mixture or julep. Used as a vehicle for medicines.

**CAMPHOR LINIMENT, EXTEMPORANEOUS.**—Camphor, 1 oz., rectified spirit,  $8\frac{1}{2}$  oz. Mix; add oil of lavender, 25 drops, strong solution of ammonia, 10 drachms. To rub on painful parts, as in sprains, bruises, rheumatism, &c., combined with oil or with soap liniment.

**CAMPHORATED ACETIC ACID.**—(E. and D. Ph.)—Camphor,  $\frac{1}{2}$  oz. E. (1 oz. D.); acetic acid (sp. gr. 1.064),  $6\frac{1}{2}$  oz, E. (10 oz. D.); rectified spirit, 1 drachm (E. and D.). Mix the camphor and spirit, and add the acid. Used as an embrocation for bruises and swellings, and as a scent-bottle.

**CAMPHORATED CHALK.**—1. Precipitated chalk, 6 oz., camphor, 1 oz.; mix. Used as a tooth-powder.

2. Precipitated chalk, 1 lb., orris root, 8 oz., camphor, 4 oz. Powder and mix. Used as a tooth-powder.

**CAMPHORATED OIL.**—Olive oil, 8 oz., camphor, 1 oz. Grate the camphor, mix with the oil, and digest in a gentle heat.

**CAMPHORATED VINEGAR.**—Grated camphor, 1 oz., vinegar (white wine,) 1 quart. Employed as a seent, a gargle, and largely diluted, as a lotion against infection.

**CANDY.**—A sugar preparation of peels, &c. The peels of orange, lemon, citron, the green roots of ginger, or the stalks of angelica, are boiled in water until soft, and afterwards boiled in syrup until they become transparent; they are then dried at a gentle heat in a stove. Used in confectionary.

**CANDY, HOECHOUND.**—To a strong decoction of horehound add 4 lbs., or sufficient, of lump sugar to each pint; evaporate until a small portion candies on cooling, then roll it into cakes. Used to relieve eough. In a similar manner other vegetable candies may be prepared.

**CANDY, CARRAWAY.** Rhubarb and powdered carraway, of each 1 drachm, oil of carraway, 10 drops, ginger and cinnamon, of each 15 grains, magnesia, 6 drachms, sugar, 2 oz. Add mucilage of tragacanth, sufficient to make a paste; cut it into lozenges, and let them dry.

**CANDY, DIGESTIVE OR LIVE-LONG.** Heavy magnesia, 1 oz., powdered rhubarb, 1 drachm, ginger and cinnamon, of each 15 grains, sugar, 2 oz., mucilage as the last.

**CANNELLE (La.)**—Cinnamon.

**CANTON'S PHOSPHORUS.**—Heat strongly for an hour, in a covered crucible, 3 parts of calcined oyster-shells, and 1 part of flour sulphur. After exposure to sunshine, it emits light in the dark.

**CAOUTCHOUC**, known as India-rubber, or gum elastic, is waterproof, and hence much used in the arts. It is more or less soluble in various liquids, which are used to distribute it over clothes, &c. Ether dissolves it readily, but it must first be washed and decanted.

Naphtha distilled from coal-tar is the solvent menstruum used for Mackintosh's india-rubber fabrics. Oil of turpentine highly rectified dissolves it readily. Benzole will dissolve it, with continued heat and digestion. Caoutchoucine, the distilled product of india-rubber, is employed as a solvent. The easiest mode of obtaining a solution where expense is immaterial, is to use chloroform, or bisulphuret of carbon, which are excellent mediums for the solution, as the gum dissolves without heat, or with very little. India-rubber, when boiled in carbonate of soda, or water of ammonia, becomes more soluble than it was previously. Linseed oil boiled with litharge, and spread in thin layers, drying each before applying another, forms *artificial caoutchouc*. It is elastic and semi-transparent, but the preparation requires long drying.

**CAOUTCHOUCINE.**—India-rubber is distilled dry, at a temperature of  $600^{\circ}$ , where a volatile fluid comes over, and on being rectified once or twice, it forms the spirit called caoutchoucine. It is the lightest fluid known; it mixes with alcohol and oils in all proportions, and dissolves india-rubber, copal, the resins, &c., with facility at the ordinary temperature. From its volatility it soon dries, and therefore requires to be kept in well-stoppered vessels.

**CAPILLAIRE.**—Distilled water, 1 pint, lump sugar,  $3\frac{1}{2}$  lbs.; dissolve with a gentle heat, and when nearly cold, add 1 oz. orange-flower water. Used to sweeten liquors, and to make summer drinks.

**CAPILLAIRE, LIMONIATED.**—Add to the last, essence of lemon,  $\frac{1}{2}$  drachm, citric acid, 1 oz.

**CAPSULES** are used to enclose nanscous liquid medicines. An oblong bulb is dipped into melted gelatine, and when withdrawn it is rotated, to distribute the gelatine equally over the mould. On hardening, they are placed on pins to dry; they are then filled, and the orifice closed with liquid gelatine.

**CARBONATE.**—A compound of carbonic acid with a base.

**CARBONATE OF IRON WITH SUGAR (P. L.)**—Sulphate of iron, 4 oz., carbonate of soda, 34 drachms, sugar, 2 oz., boiling distilled water, 4 pints. Dissolve separately the carbonate and sulphate in 2 pints of hot water; mix the solutions, and let the carbonate of iron be deposited. Pour off the liquor, and wash the carbonate frequently with water. To this add the sugar, dissolved in 2 oz. of water, and evaporate to a dry powder, which must be kept in a well-closed vessel. **Tonic**,—dose, 2 to 5 grains.

**CARBONATE OF MAGNESIA (P. L.)**—Sulphate of magnesia, 4 lbs., carbonate of soda, 4 lbs. 9 oz., boiling distilled water, 4 gallons. Dissolve separately the carbonate and sulphate in 2 gallons of water; filter, and mix. Boil and stir for 2 hours, adding distilled water as required; pour off the fluid, wash the powder with boiling distilled water, and dry it.

*Characters and Tests (P. L.)*—Soluble in dilute sulphuric acid. From this solution, when effervescence has ceased, nothing is thrown down by bicarbonate of potash. Water in which it has been boiled does not change the colour of turmeric to yellow, nor does it throw down anything on the addition of chloride of barium or nitrate of silver.

**Antacid, absorbent, aperient.** Used as an aperient in many disorders; with rhubarb and ginger, it forms **Gregory's Powder**. Dose: 15 to 20 grains.

**CARBONATE OF POTASS.**—The P. L. gives no directions for its preparation.

*Characters and Tests (P. L.)*—Deliquesces in the air; almost entirely soluble in water. The solution changes the colour of turmeric to brown; when super-saturated by nitric acid, neither carbonate of soda nor chloride of barium throws down anything, and nitrate of silver but little. 100 grains of this salt lose 16 grains at a high temperature, and the same quantity added to dilute sulphuric acid evolves 26.3 grains of carbonic acid. Let it be kept in a well-stoppered bottle.

Antacid, diuretic, liquefacient. Dose, 10 to 20 grains.

20 grains make a cooling effervescent draught with 17 grains of citric acid, or 4½ drachms of lemon juice.

**CARBONATE OF SODA.**—No directions for its preparation are given in the P. L.

*Characters and tests* (P. L.)—Colourless; transparent, exposed to the air it crumbles to powder; is soluble in water. The solution turns turmeric brown; after saturation by hydrochloric acid, chloride of barium throws nothing down from it. 100 grains of this salt at a high temperature lose 62.5 grains of water. The same quantity, added to dilute sulphuric acid, evolves 15.28 grains of carbonic acid.

Antacid. Used in indigestion with bitter infusions. Dose 10 to 30 grains.

**CARBONATE OF SODA, DRIED** (P. L.) Heat 1 lb. of carbonate of soda, until the crystals crumble down; afterwards burn to redness, and rub to powder. It is soluble in water. 100 grains, added to dilute sulphuric acid, emit 40.7 grains of carbonic acid. Used in powders and pills; 12 grains are equal to 32 grains of common carbonate. Dose 5 to 10 grains.

**CARBONIC ACID GAS.**—1. Add hydrochloric or nitric acid, with 4 times its weight of water, to fragments of marble, until the gas is freely disengaged. If wanted dry, pass it through concentrated oil of vitriol, or over dried chloride of calcium. It may be collected over water, with a little loss, or over mercury in the pneumatic trough.

2. Use similarly chalk powder, and dilute sulphuric acid. Colourless, agreeable taste and odour, irrespirable. Sp. gr. 1.524. 100 cubic inches weigh 47.26 grains. The gas is poisonous, it is emitted by burning charcoal, at the bottom of mines, old wells, and brewer's vats, and is given off in the human breath. Cold water absorbs its own weight, lime-water is rendered turbid, by the formation of carbonate of lime.

**CARBONIC OXIDE.**—Heat finely-powdered ferro-cyanide of potassium with 8 or 10 times its weight of concentrated

sulphuric acid. The salt is entirely decomposed, yielding a copious supply of pure carbonic oxide gas, which may be collected over water in the usual manner.

*Fownes.*

Combustible, colourless, inodorous, poisonous. Sp. gr. 0.973; 100 cubic inches weigh 30.21 grains.

CARBURETTED HYDROGEN is the dreaded *fire-damp* of the mines, which explodes immediately from the flame of a candle, &c. It may be procured from some stagnant pools, or formed artificially.

*Preparation.*—Crystallized acetate of soda, 40 parts, solid hydrate of potassa, 40 parts, quick-lime in powder 60 parts. Heat this mixture strongly in a retort; the gas is evolved abundantly, and may be received over water.

Combustible, colourless, almost inodorous, not poisonous. Sp. gr. 0.559; 100 cubic inches weigh 17.41 grains.

CARLSBAD WATER (*Artificial.*)—Hydro-chlorate of lime, 8 grains, tincture of sesqui-chloride of iron, 1 drop, sulphate of soda, 50 grains, carbonate of soda, 60 grains, hydrochloride of soda, 8 grains, carbonated water, 1 pint.

CARMINATIVE, DALBY'S—1. Carbonate of magnesia, 2 scruples, oil of peppermint, 1 drop, oil of nutmeg, 2 drops, oil of aniseed, 3 drops, tincture of castor, 30 drops, tincture of assafoetida, 15 drops, tincture of opium, 5 drops, spirit of pennyroyal, 15 drops, compound tincture of cardamoms, 30 drops, peppermint-water, 2 oz. Mix.—*Dr. Paris.*

2. The following is a retail druggist's substitute. Carbonate of magnesia, 1 drachm, powdered rhubarb, 45 grains, fetid spirit of ammonia, 1 drachm, oil of aniseed, 15 drops, syrup, 2 oz., water, 4 oz. Mix.

CARMINE.—A beautiful crimson pigment, between lake and vermillion in colour. It is most economically prepared on a large scale; but is in any way an expensive preparation. On the small scale it may be thus procured. Boil 1 oz. of powdered cochineal with 5 quarts of distilled water in a tinned vessel for 3 minutes, add 25 grains of alum, boil for 2 minutes, and withdraw the

clear liquor, at a blood heat, into shallow vessels, then let the carmine subside for 2 days. If it does not readily precipitate, add a few drops of muriate of tin, or of a solution of sulphate of iron, and it will fall immediately. Dry the powder carefully.

**CARMINE, LIQUID.**—Carmine dissolved in solution of ammonia. Used as an ink, and in painting.

**CARPETS, TO CLEAN.**—Brush them with damp waste tea leaves, sprinkle on them, shake and beat them, then mix 3 gills of ox gall in a gallon of water; brush the carpet over with this; remove the lather formed with plenty of clean water, and dry with dusters. Afterwards hang them in an airy apartment.

**CARRABELLI'S DENTIFRICE.**—Cuttle-fish bone and prepared shells, of each 3 oz., cinnamon, orris-root, and charcoal, of each 6 drachms, vanilla, 20 grains; powder and mix. Used to clean the teeth.

**CARRON OIL.**—Equal parts of lime-water and raw linseed oil. An application to burnt surfaces, used in the Carron iron-works; it is the liniment of lime of the P. L.

**CARTWRIGHT'S DENTIFRICE.**—Prepared chalk and orris-root, of each 1 oz., Castile soap,  $\frac{1}{2}$  drachm; mix.

**CASE-HARDENING**—A superficial hardness bestowed on iron-work. 1. Iron heated to redness is sprinkled with ferro-prussiate of potass, and when the salt has fused, the metal is plunged into water.

2. The iron is enclosed in a box and surrounded with animal horns, hoofs, bones, or skins, first charred and powdered. Close the box lid, heat it strongly in a furnace, and let it cool. On removing the iron, it is hardened on the surface, being superficially converted into steel. When goods are wanted *hard*, but not *brittle*, they are plunged while hot into oil.

**CASKS, TO SWEETEN.**—Wash them well with hot water; then proceed to cleanse them by any of the following modes.

1. Oil of vitriol and water, equal parts; mix, wash the cask, and afterwards rinse with clean water.

2. Wash with chloride of lime first, then proceed as above.
3. Wash with strong lime-water.
4. Dip linen cloth in melted brimstone, set it on fire, put it into the cask at the bung-hole, and drive in the bung so as to suspend the cloth. In two hours open the bung-hole.

**CASTOR OIL POMADE.**—Olive oil, 5 oz., almond oil, 2 oz., castor oil, 1 oz., spermaceti,  $\frac{1}{2}$  oz., lard, 8 oz. Melt the spermaceti, and add the lard, add afterwards the oils, then mix; let it cool, and when nearly cold add the following scent; essence of bergamotte, 10 drops, essence of ambergris, 20 drops, oil of lavender, 1 drop, otto of rose, 3 drops. Fragrant.

**CATHETER.**—An instrument for relieving the bladder when incapable of passing the urine. Coat a piece of catgut with melted wax, and while cooling, give it the proper shape. When cold coat it with indian-rubber (dissolved in ether, chloroform, or bisulphuret of carbon) and repeat the coating as often as required; then withdraw the catgut by melting the wax in boiling water.

**CAYENNE, SOLUBLE.**—A pepper, used as a condiment. Strong tincture of cayenne is added to common salt, and the solution evaporated until a little on cooling crystallizes. A little annatto or saffron may be used to colour with. The salt is soluble, and has a pungent taste of the pepper.

**CEMENT.**—A compound for joining surfaces, or a mortar used in building.

*Cement, Alabaster.*—1. Plaster of Paris mixed to a cream with water. Used to join alabaster or marble.

2. Yellow resin and bees' wax, equal parts; melt. Applied warm to heated alabaster, marble, stone, &c. Small holes are filled with shellac, melted, and coloured to shade.

*Cement, Architectural.*—Strong rice-water size, and paper, pulped in boiling water, are mixed together, enough whiting is then added to make it of a proper consistence. Used to make paper architectural models.

*Cement, Armenian.*—1. Isinglass, 2 drachms; soak for 24 hours in 2 oz. water, boil to half, add 1 oz. recti-

fied spirit, and strain while hot through linen. Melt 1 drachm of mastic, and  $\frac{1}{2}$  drachm of ammoniae in 1 oz. of rectified spirit; add this solution to the first, and mix the two thoroughly.

2. Isinglass, 1 oz., distilled water, 6 oz., boil to half; add 1  $\frac{1}{2}$  oz. of rectified spirit, 5 oz. tincture of mastic, and  $\frac{1}{2}$  oz. of ammoniae emulsion.
3. Isinglass, 1 oz., dissolve in rectified spirit, add mastic varnish, 1  $\frac{1}{2}$  oz.

Used as a general cement for small articles. The surfaces to be united are warmed, spread *thinly* with the glue, and allowed to cool under pressure.

*Cement, Botany Bay.*—Resin and brickdust, equal parts; melt the resin, and sprinkle in the dust. Used to cement coarse earthenware, knife-handles, &c.

*Cement, Bottle.*—Resin 15 parts, bees'-wax, 3 parts; ivory black, or Venitian red, to colour. Used to cover the corks of bottles, &c.

*Cement, Chinese.*—Shellac dissolved in *wood naphtha*, or rectified spirit. Used to piece wood, and mend glass, china, or fancy ornaments. Melted shellac will answer equally well for earthenware, &c.

*Cement, Coppersmith's.* Bullock's-blood thickened with quick-lime. Used *fresh* to joints, &c., of copper vessels; it hardens very rapidly.

*Cement, Egg.* White of egg thickened with powdered quick-lime. Some add milk curds, others add cheese to this cement. Used to mend earthenware, glass, &c.

*Cement, Electrical.* 1. Rosin, 5 lb, wax, and dried red ochre, of each 1 lb, plaster of Paris, 4 oz. Melt the rosin and wax, add the ochre, and then the plaster; mix.

2. Rosin, 6 lb, dried red ochre and plaster of Paris, of each 1 lb, boiled oil, 4 oz. Melt the rosin and oil, add the ochre and plaster; mix. Both are used to cement voltaic troughs, and join chemical vessels.

*Cement, Engineers'.* 1. Red lead and white lead, equal parts, boiled oil sufficient to mix to a paste. Applied on tow or canvass to render joints steam-tight, and used to render cisterns water-tight.

2. Quicklime, 10 lb, boiled oil, 1 quart; mix. Applied on hemp to water-pipes, and corded.

*Cement, French.* Gum-water and starch. Used for artificial flowers, and for paper.

*Cement, Hydraulic.* 3 lb dried and powdered clay, 1 lb oxide of iron; boiled oil sufficient to make a paste. Used to work when required to harden under water.

*Cement, Hensler's.* Litharge, 3 parts, quicklime, 2 parts, white bolic, 1 part; linseed-oil varnish sufficient to make a paste; grind together. Dries slowly.

*Cement, Iron.* 1. Iron turnings, 5 lb, sal ammoniac, 2 oz., sulphur, 1 oz., water to mix. Must be used immediately. Applied to the joints of iron pipes, and rammed in tightly. Dries slowly without the sulphur, but sets harder.

2. Powdered dried clay, 6 lb, iron filings, 1 lb, boiled oil sufficient to mix. Used to stop up cracks in iron boilers, pans, pipes, &c.

3. White of egg, sufficient, quicklime enough to thicken, iron filings to mix. Damp with water for use. Applied internally to cracks in boilers or pans.

*Cement for Leather and Cloth* An adhesive material for uniting the parts of boots and shoes, and for the seams of articles of clothing, may be made thus: Take 1 lb of gutta pereha, 4 oz. of india-rubber, 2 oz. of pitch, 1 oz. of shellac, 2 oz. of oil. The ingredients are to be melted together, and used hot.

*Cement, Mahogany.* Shellac melted and coloured. Used to fill up holes and cracks.

*Cement, Opticians'.* Resin, 1 lb; melt, add dry plaster of Paris, 4 oz. Used to fix glasses and stones while grinding or polishing. For fine work the Chinese cement is used.

*Cement, Rice.* Add cold water to rice-flour, and mix thoroughly, then gradually bring it to a proper consistency with boiling water, and boil one minute. Used as a colourless cement for paper.

*Cement, Stone.* 1. Whiting, 1 ewt., rosin, 2 qrs. 18 lb., sulphur, 18½ lb, tar, 9 lb; melt together. Used to ce-

ment together stones of cisterns, and render them waterproof.

2. Sand, 1 ewt., quicklime, 28 lb, bone ashes, 14 lb; mix with water. Waterproof.

*Cement, Turners'.* Rosin and pitch, of each 1 oz., bees' wax, 2 oz., brick-dust sufficient to thicken. Used as a temporary fastening by turners.

*Cement, Transparent.* India-rubber, 75 parts, chloroform, 60 parts. Mix, and add to the solution, mastic, 15 parts.

**CEPHALIC SNUFF.** 1. Asarabacea leaves dried, 3 parts, marjoram and lavender flowers, of each 1 part. Mix in fine powder.

2. (*Boeli's.*) Valerian and snuff, of each 2 drachms, oil of lavender and oil of marjoram, of each three drops. Mix.
3. Snuff, 2 oz., subsulphate of mercury,  $\frac{1}{2}$  drachm; mix. All these are used to clear the head, and assist the eyesight, by occasionally taking a pinch.

**CERATES** are preparations of a firmer consistence than Ointments, from the wax they contain. The name is derived from *cera*, wax.

*Cerate, (P. L.)* Olive oil, 1 pint, wax, 20 oz. Melt the wax, and gradually add the oil. To protect sores from the action of air.

*Cerate of Acetate of Lead, (P. L.)* Powdered acetate of lead, 5 drachms, white wax, 5 oz., olive oil, 1 pint. Dissolve the wax in 18 oz. of the oil; add to this the lead mixed with the remainder of the oil, and stir with a spatula until they are thoroughly united. Applied to burns, excoriations, and irritable ulcers.

*Cerate of Calamine, (P. L.)* Prepared calamine and wax, of each  $7\frac{1}{2}$  oz., olive oil, 1 pint. Melt the wax, add the oil; and when they are cooling, add the calamine, and stir until hard. Used to heal ulcers and burns, when the inflammation has subsided.

*Cerate of Cantharides, (P. L.)* Cantharides rubbed to fine powder, 1 oz., spermaceti cerate, 6 oz. Melt the

cerate, and add the cantharides. Employed to promote the discharge from a blistered surface.

*Cerate of Lead, Compound, (P. L.)* Solution of diaacetate of lead, 6 oz., wax, 8 oz., olive oil, 1 pint, camphor, 1 drachm. Mix the melted wax and 16 oz. of the oil, and when cooling, add the lead; stir until cool, then add the camphor dissolved in the rest of the oil. Used as the former lead cerate.

*Cerate of Mercury, Compound, (P. L.)* Ointment of mercury and compound soap cerate, of each 6 oz., camphor, 1½ oz. Rub them together. Applied to thickened joints, and uninflamed tumours.

*Cerate of Resin, (P. L.)* Resin and wax, of each 15 oz., olive oil, 1 pint. Melt the solids, add the oil, and strain through linen. Used to promote the suppuration of boils, ulcers, and open tumours.

*Cerate of Soap, Compound, (P. L.)* Soap, 10 oz., wax, 12½ oz., powdered oxide of lead, 15 oz., olive oil, 1 pint, vinegar, 1 gallon. Boil the lead and vinegar slowly, stirring until they unite; add the soap, and boil until the moisture is evaporated; then add the wax, previously dissolved in the oil. Used as a cooling dressing and to support fractured limbs previous to applying the splints.

**CHALK, PRECIPITATED.** Carbonate of soda, 11 lb, water by weight, 6 lb. Mix, and add this to a solution of hydrochlorate of lime; and repeatedly wash the precipitate with distilled water.

*Chalk, Prepared.*—Rub 1 lb of chalk with water to a fine powder, mix it in a large quantity of water, and after a short time pour off the still turbid liquor, and collect the precipitate which it will form.

These chalks are used in tooth-powders, mixtures, and medicines.

**CHALYBEATE WATER.**—1. Boiled water, 1 pint, sulphate of iron, 1 grain; mix. Tonic.

2. *Aerated.*—Water carbonated, 1 pint, carbonate of soda, 4 grains, sulphate of iron, 1 grain; mix.

CHAMBERLAIN'S RESTORATIVE PILLS.—Vermilion and sulphur mixed with mueilage.

CHAMELEON MINERAL.—Heat in a erucible equal parts of black oxide of manganese and pure potash; preserve the product in close bottles. Added to water it passes from green to red.

CHAMOMILE DROPS.—Spirit flowered with oil of ehamo-mile.

CHAMOMILE PILLS.—Aloes purified, 12 grains, extraet of rhubarb, 12 grains, extraet of chamomile, 36 grains; make into 12 pills. Tonie, stomaehie; two for a dose.

CHAPPED HANDS.—Glyeerine and rose-water, of each  $\frac{1}{2}$  oz.; mix, and rub it on the back part of the hands night and morning. They will require very few appliciations before they are well.

CHARCOAL.—The calcined product of animal and vegetable substances. It is employed in medicine, and in the arts, and is an ingredient in gunpowder. It is only prepared on a large seale.

*Charcoal, Lardner's Prepared.*—Chareoal, 1 oz., prepared chalk, 3 oz.; mix. Used as a tooth-powder.

CHARCOAL TOOTH-POWDERS.—The chareoal should be prepared from willow, areka nut, or lime-tree.

1. Chareoal, 1 oz., sugar, 1 oz., oil of eloves, 3 drops, oil of cinnamon, 1 drop; mix.
2. Willow chareoal, 4 oz., cinchona bark, 4 oz., cloves,  $\frac{1}{2}$  draehm; mix.—*Desforges.*
3. Chareoal, 1 oz., red bark, 1 oz., sugar,  $\frac{1}{2}$  oz., oil of cloves, 5 drops; mix.
4. Chareoal, 1 oz., sulphate of quinine, 2 grains, cream of tartar,  $\frac{1}{2}$  drachm, otto of rose, 2 drops; mix.

*Paste.*—Chlorate of potash,  $\frac{1}{2}$  drachm, mint-water,  $\frac{1}{2}$  oz.; mix, add chareoal, 1 oz.—*Dyon.*

CHARCOAL CRAYONS.—Saw pieces of chareoal to the requisite shape; let them maeerate for 30 minutes in melted

wax; then dry them on blotting paper. Drawings of this, warmed at the back, become indelible.

**CHARTA EXPLORATORIA.**—A test paper.

**CHAVASSE'S REMEDY FOR HOOPING COUGH.** Sulphate of copper,  $\frac{1}{2}$  grain, syrup of poppies,  $\frac{1}{2}$  oz., aniseed water,  $1\frac{1}{2}$  oz. Mix. Dose: one to two teaspoonfuls.

**CHELSEA PENSIONER.** Rhubarb,  $\frac{1}{2}$  oz., gum guaiacum,  $\frac{1}{2}$  oz., cream of tartar, 2 oz., sulphur,  $\frac{1}{4}$  oz., 2 nutmegs, and honey,  $1\frac{1}{2}$  lb. Make into a confection. Used for rheumatism. A Chelsea pensioner cured Lord Amherst with it; hence the name.

**CHELTENHAM SALTS.** Glauber's salt, 1 oz., Epsom salt,  $\frac{3}{4}$  oz., common salt, 1 drachm, sulphate of iron, 2 grains. Dry the powders separately, and mix. An imitation, when dissolved, of the Cheltenham waters. Purgative and tonic.

**CHEMICAL BRONZE.** Hydrochlorate of ammonia, 62 grains, oxalic acid, 15 grains, vinegar, 1 pint. Mix. Clean the metal to be bronzed, and brush in the bronze to the required tint.

**CHILBLAINS** are the effect of cold checking the circulation of the blood, or they arise from holding the chilled limbs to the fire. Exercise and well-shod feet are the best preventives.

**CHILBLAINS, TO CURE.** Rub them, if *unbroken*, with either of the following stimulating liniments:

1. Tinture of eantharides and compound camphor liniment, equal parts; mix.
2. Soap liniment, 1 oz., tinture of eantharides,  $\frac{1}{2}$  oz., turpentine,  $\frac{1}{2}$  oz.; mix.

If *broken*, dress them with resin eerate, until drawn, and afterward with lead eerate.

**CHING'S WORM LOZENGES** are prepared with ealomel and jalap.

**CHLORATE.** A salt of chlorine acid with a base. The chlorates are soluble in water, and explode when rubbed with sulphur or phosphorus.

CHLORATE OF BARYTES. Saturate solution of chloric acid with fresh precipitated carbonate of barytes; filter, and crystallize. Or pass chlorine gas through a strong solution of carbonate of barytes.

CHLORATE OF POTASS. Make a strong and warm solution of carbonate of potash, and saturate it with chlorine gas; evaporate, and crystallize. Used as a medicine, in doses of 5 to 15 grains, as a stimulant and diuretic. In the arts, to manufacture fire-works, oxygen gas, and lucifer matches. Detonates with sulphur and phosphorus.

*Chemical Experiments.* 1. Powder 2 grains of chlorate of potass, triturate gently with 1 grain sulphur, then collect the whole in a heap, and forcibly strike it with the pestle; it will explode.

2. Wrap the above in a paper, and strike it on an anvil with a hammer.
3. Sugar, 2 parts, chlorate, 1 part; mix, and on adding a little strong sulphuric acid, it will inflame.
4. Chlorate, 2 parts, phosphorus 1 part, triturate, and it will explode. Care must be taken in these experiments to use *small quantities*, and explode them cautiously.

CHLORIC ACID. A compound of chlorine and oxygen, prepared from chlorate of baryta.

CHLORIC ETHER. Spirit of wine, 5 parts, chloroform, 1 part. Mix.

CHLORIDES. Compounds of chlorine with a base. The best known preparation is the *chloride of lime*, for bleaching and disinfecting purposes; it is prepared by passing chlorine into lime-water. See *Chlorine*.

CHLORINE is prepared most readily by pouring strong hydrochloric acid upon finely-powdered black oxide of manganese in a retort, and applying heat. A heavy yellowish green gas is disengaged, which may be collected over warm water, or by displacement.

Odorous, suffocating, soluble in water; sp. gr. 2.47; 100 cubic inches weigh 76.6 grains. Paper wetted with

pentine and plunged in chlorine inflames; phosphorus takes fire spontaneously in it; copper leaf, powdered antimony, and arsenic, undergo combustion in the same manner. Equal parts of chlorine and hydrogen explode violently on the passage of an electric spark, or from the application of a lighted taper. Chlorine is a powerful bleacher, immediately destroying vegetable colours; and it is much employed as a disinfectant. The usual substance employed for this latter purpose is the chloride of lime, of which 1 oz. is added to a quart of water, and sprinkled about the apartment to be purified.

**CHLORINE GAS.** 1. Powdered bichromate of potash, 1 part, hydrochloric acid, 6 parts, (s. g. 1.16.) Apply a gentle heat, and the gas is rapidly evolved in a pure state.

2. Common salt, 6 parts; dissolve in a little water; add nitric acid, 1 part, black oxide of manganese, or peroxide of lead (minimum,) 1 part. Apply a gentle heat, and an abundant supply of pure gas will pass over. *Watt.*

**CHLOROFORM, (P. L.)** Chlorinated lime, 4 lb, rectified spirit,  $\frac{1}{2}$  pint, water, 10 pints, chloride of calcium in pieces, 1 drachm. Put the mixed lime and water into a retort; add the spirit so that all occupies only one-third of the retort. Heat it in a sand bath, and when ebullition commences, at once withdraw the heat, lest the retort be broken. Let the liquid distil into the receiver, while nothing subsides; applying heat again when necessary. To the distilled liquid add  $\frac{1}{4}$  of the water, and mix well. Separate the heavier portion, which subsides, add the chloride to it; frequently shake during half an hour, and re-distil from a glass retort into a glass receiver.

**Characters and Tests, (P. L.)** Colourless, agreeable odour; sp. gr. not less than 1.48. Nearly insoluble in water; does not turn litmus red. Rubbed on the skin, it soon flies off, and leaves but little scent.

Used to produce insensibility to pain, by breathing the vapour. Applied locally to painful parts, and in tooth-

ache, &c. A ready solvent of India-rubber, and gutta pereha.

**CHOLERA.** An epidemic disease of a severe nature. The *English Cholera* is not so fatal as the scourge termed the *Asiatic Cholera*. The treatment of English cholera is somewhat similar to diarrhoea; the bowels are emptied by a suitable aperient, and astringents with opium are then generally most efficacious. The severer form of cholera often resists alike all modes of treatment; but on the latest visitation of this disease the following formulæ were recommended:

1. *Cholera Mixture.*—Tincture of opium, tincture of camphor, and spirits of turpentine, of each 3 drachms, oil of peppermint, 30 drops; mix. Dose: One teaspoonful in brandy and water for diarrhoea; one tablespoonful for cholera. *Sir James Clark.* Sir J. C. has denied that this formula is his; but it has generally been attributed to him. It proved one of the most effective and popular remedies in 1849.
2. *Mixture.*—Tincture of catechu and kino, of each  $\frac{1}{2}$  oz., tincture of opium, 2 drachms. *Dr. O'Donnell.* Dose: One teaspoonful in brandy and water.
3. *Liverpool Preventive Powders.* Bicarbonate of soda, 1 scruple, ginger, 8 grains, in a glass of water after breakfast and supper.
4. Bicarbonate of soda, 12 grains, common salt and chlorate of potash, of each 6 grains; mix, and take in cold water.
5. Chalk mixture, 1 oz., aromatic confection, 10 to 15 grains, tincture of opium, 5 to 15 drops. To be taken every 3 or 4 hours until looseness ceases. *Board of Health.*
6. *Pills.*—Acetate of lead, 20 grains, opium, 12 grains, in 12 pills; one every half hour until looseness ceases. No two practitioners agreed throughout in their treatment of this disease, against which every known agent and medicine has failed. The first form (Sir J. Clark's,) succeeded admirably in most cases, and will doubtless be again resorted to in future visitations. Many sur-

geons administered small doses of calomel every 10 or 15 minutes; a plan which occasionally succeeded, and failed.

**CHLORETUM AMMONII DEPURATUM.**—Hydrochlorate of ammonia.

**CHLORETUM HYDRARGYRI.**—Calomel.

**CHROMATES** are formed of chromic acid and a base, are yellow or red in colour; the latter, when acid is in excess.

**CHROMATE OF POTASH** is prepared from the chrome-iron ore, and is the source of all the preparations of chromium. Chromate of potash is of a bright yellow colour, cool, bitter, disagreeable taste, soluble in 2 parts water at 60°; it is used in dyeing, bleaching, and the arts.

**CHROMATE OF POTASH, (Bi-)**—Add to a solution of chromate of potash, sulphuric or acetic acid to acidulate it; heat the liquid, and crystallize. Product: red crystals, soluble in 10 parts water.

**CHROME, RED.**—To saltpetre fused at a low red heat in a crucible, add chrome yellow until the nitre is nearly exhausted. The mass is black while hot, and must be left a minute or two to settle, when the liquid portion must be poured off, and the mass well washed with water, and dried. The tint almost rivals vermillion in beauty. Used as a pigment.

**CHROME, YELLOW.**—1. Add to a solution of chromate or bichromate of potash, a solution of nitrate or acetate of lead, so long as a precipitate falls; wash, and dry it, away from sulphurous vapour. Used as a pigment. There are usually 3 shades; pale, middle, and deep; the pale is formed by adding a little alum or sulphuric acid to the chromate, before adding the solution of lead; the deep is caused by a similar use of subacetate of lead.

**CHROME, GREEN.**—1. Mix bichromate of potash, 2 parts,

with hydrochlorate of ammonia, 1 part; heat to redness, and wash with boiling water; dry the residue. Used as a pigment.

2. Prussian blue, and chrome yellow mixed.

CHROMIC ACID.—A compound of chromium and oxygen.

1. Obtained *pure* by passing the gaseous fluoride of chromium into water contained in a silver or platinum vessel, and evaporating the liquid to dryness.
2. Or, by mixing bichromate of potash with a solution of nitrate of silver, washing the precipitate, and decomposing it by muriatic acid.
3. *Nearly pure*.—Cold saturated solution of bichromate of potash, 100 measures, oil of vitriol, 150 measures; mix, and let it stand to crystallize. Place the crystals on a tile to drain, closely covered with a glass, or bell-jar.

Red crystals, soluble in water and aleohol, decomposed by light and contact with organic matter. Must be preserved in well stoppered vessels, and filtered through asbestos. Employed as a bleaching agent, and in calico-printing.

4. Make a hot concentrated solution of bichromate of potash, and add concentrated sulphuric acid. A crystalline crimson precipitate falls, which is chromic acid. This is dried and washed, to purify it.

CINNABAR OF ANTIMONY.—Vermilion.

CINNERES CLAVELLATI.—Crude carbonate of potash.

CRYSTAL MINERAL.—Fused purified nitre.

CIRCASSIAN CREAM.—Olive oil, 1 pint, white wax, 3 oz., spermaceti, 2 oz., alkanet root,  $\frac{1}{2}$  oz. Warm the oil and alkanet, then strain, and add it to the melted spermaceti and wax. Seent with  $2\frac{1}{2}$  drachms of English oil of lavender, and  $\frac{1}{2}$  drachm of essence of ambergris. Used for the hair.

CIRCASSIAN CREAM FOR DRESSING THE HAIR.—Take 2 oz. of perfectly fresh suet, either of mutton or venison, 3 oz. of olive oil, 1 oz. of gum benzoin in powder, and

$\frac{1}{4}$  oz. of alkanet root. Put the whole into a jam jar, which, if without a lid, must be tied over with bladder. Now place the jar in a saucepan containing boiling water, at the side of a fire. Let the ingredients digest for a whole day, then strain away all that is fluid through fine muslin, and stir till nearly cold. Any perfume that is most admired is then to be added, such as essence of almonds, roses, bergamotte, or cloves—say about a drachm.

**CIRCASSIAN DENTIFRICE.**—Prepared hartshorn, 2 oz., sulphate of potash, 2 oz., cuttle-fish bone, 8 oz., orris-root, 4 oz., yellow sandal wood, 1 oz., rose pink, 3 oz., oil of rhodium, 30 drops. Mix the powdered ingredients, and add the rhodium.—*Dr. Halifax.*

**CITRIC ACID (P. L. 1836.)**—Juice of lemons, 4 pints, prepared chalk,  $4\frac{1}{2}$  oz., diluted sulphuric acid,  $27\frac{1}{2}$  oz., distilled water, 2 pints. Heat the juice, add the chalk; let the powder subside, and pour off the liquor. Wash the citrate of lime frequently with warm water, pour on it the sulphuric acid and water, and boil for 15 minutes; express the liquor, filter it, and evaporate with a gentle heat; then set it by to crystallize. To obtain the crystals pure, dissolve them a second and third time, filter each solution, evaporate, and set it aside to crystallize.

This preparation, though easy to an experienced chemist, is often spoiled by the inexperienced operator, and being now manufactured on a large scale, the London college have not repeated their instructions in the last *Pharmacopœia*. They give, however, the following

*Characters and Tests.*—Colourless, decomposed by heat, soluble in water or spirit; what is precipitated from a watery solution by acetate of lead is dissolved by nitric acid. No salt of potash precipitates with citric acid except the tartrate. Added sparingly to cold lime-water, it does not render it turbid. 100 grains dissolved in water are saturated by 205.7 grains of crystallized carbonate of soda.

**CLAUDET'S INSTANTANEOUS POSITIVE PAPER.**—Float the sheet in a solution of distilled water, 1 pint, and corro-

sive sublimate, 5 drachms; dry it, and wash with a solution of nitrate of silver, 38 grains to each ounce of distilled water. The print, or negative, is exposed over this to the light, for a period varying from two seconds to a minute. The development is effected with sulphate of iron, 15 grains, glacial acetic acid, 25 grains, and distilled water, 1 oz. The positive is then washed, and fixed with hyposulphite of soda.

**COCHINEAL, LIQUID.**—Cochineal and salt of tartar, of each 1 oz.; boil in 8 oz. distilled water; add alum and cream of tartar, of each 1 oz., dissolve and strain. Used to colour jellies and confectionery.

**COCHRANE'S COUGH MIXTURE.**—An acidulated syrup of poppies.

**COFFEE, ESSENCE OF.**—Concentrated infusion of coffee, 95 parts, rectified spirit, 5 parts. Used to prepare coffee extemporaneously, by adding 1 or 2 teaspoonfuls to a cup of boiling water.

**COINS AND MEDALS, TO COPY.**—1. Cover the medal or coin with isinglass glue, dissolved in brandy, and leave it a day or two to harden. The impression is clear, but if the back of the glue is breathed on, and gold leaf applied, the effect is more striking. 2. Place paper round the coin like a hoop, and pour in plaster of Paris, mixed with water, to a cream, or melted wax, stearine, or fusible metal. Or copy it by the electrotype process.

**COINDET'S PILLS.**—Protiodide of mercury, 1 grain, extract of liquorice, 20 grains; for 8 pills. Dose 2 to 4 twice daily, in ulcers and serofulous tumours.

**COLD CREAM.**—1. Oil of almonds, 8 oz., white wax, 2 oz.; melt, and when cooling, add 4 oz. rose-water. Used to soften the hands, and prevent chaps.

2. Add lard, 4 oz., to the last, omit the rose-water, and substitute otto of roses, 4 drops.

3. White wax, 2 oz., spermaceti, 3 oz., almond oil, 8 oz., carbonate of potash, 30 grains, rose-water, sufficient to mix, and perfume at pleasure.

**COLLIER'S WINE OF QUININE.**—Disulphate of quinine, 18 grains, citric acid, 15 grains, orange wine, 24 oz. Mix the powders with a little wine, and add the rest. Tonic, stimulant.

**COLLINS' DISINFECTING POWDER.**—1. Dry chloride of lime, 2 parts, burnt alum, 1 part. Used with or without water, to purify rooms, cess-pools, &c.

2. Anhydrous sulphate of alumina, 1 part, chloride of lime, 2 parts. Mix.

**COLLODION.**—Mix in a glass vessel, 30 parts strong sulphuric acid with 20 parts of powdered nitre; place the vessel in cold water; add 1 part of carded cotton, stir, and open it with two glass rods, or pipe-stems; then wash the cotton in plenty of cold water, opening it until it is free from all acidity; dry it by squeezing in a cloth; spread it out, and cautiously dry it, as at a moderate heat it explodes. 1 part of the cotton, mixed with 16 parts of rectified ether, and 1 part of alcohol, forms a solution. Used to cover cuts, wounds, &c.

**COLLODION PLATES, TO CLEAN.**—Collodion pictures may be removed from glass plates by the use of methylic spirit, which will remove varnish or jet black very readily.

**COLLODION PROCESS; OR, PHOTOGRAPHY ON GLASS.**—This process is one that generally gives more pleasure to the amateur and his friends than any other. The first thing requisite is gun cotton: to make which, proceed as follows:—Take half an ounce of dry nitrate of potass (saltpetre,) and three quarters of an ounce of strong sulphuric acid (oil of vitriol;) mix in a glass or porcelain cup; then add thirty grains of dry cotton wool, and stir the whole up with a glass rod for about five minutes; remove the cotton, and wash it well in four or five waters, (common water will do;) when well washed, dry it carefully. You thus obtain gun cotton. About ten grains of this is dissolved in about three ounces of sulphuric ether, to which is added about sixty drops of alcohol. This solution is called collodion.

When collodion is poured on a clean plate of glass, it almost instantly hardens into a beautiful transparent and very tenacious film; and, taking advantage of this property, we incorporate with it a certain amount of a sensitive salt of silver, which, on being exposed in the camera in the same manner as paper, produces a most beautiful picture in a space of time varying from the fraction of a second up to ten or fifteen seconds; and this is generally accompanied with the most perfect detail of all the parts.

There are several formulas for the preparation of this useful substance; but we shall only give one, as more would confuse the amateur, and we have always found the following very certain:—Dissolve twenty grains of gun cotton in six ounces of ether, to which add three quarters of an ounce of alcohol. If the cotton does not entirely dissolve, allow it to remain for a short time, and pour the clean part off for use. Keep this solution in one bottle, and call it 1. To one ounce of alcohol (spirits of wine,) add as much iodide of ammonium as it will dissolve; then add as much iodide of silver (made from the nitrate of silver and iodide of potassium, described in the third paper,) as the solution will take up; keep this in another bottle, and call it 2. Procure another bottle with a wide mouth, and pour into it one ounce of collodion out of 1; to which add 15 or 20 drops from 2. The collodion thus formed is called collodio-iodide of silver.

Having well washed and cleaned a plate of glass, of the same size as the frame in your camera, coat it on one side evenly, and without hurry, by passing the collodion, on the centre from the bottle; pour back any excess of liquid from one corner, and then draw the mouth of the bottle along the under edge of the glass, until you come to the other corner of the plate. In this way you cause the collodion to cover the plate in an even manner.

To expose the plate thus loaded with collodion for the camera, proceed as follows:—In a trough or bath made of gutta percha, glass, or porcelain, large enough

to hold the plate, make a mixture in the following proportions: distilled water, 1 oz., nitrate of silver, 30 grains, alcohol, 30 drops; dissolve and filter, (if the bath contain six or eight ounces you of course increase the quantity of each six or eight times;) you then carefully and quickly plunge the coated plate of glass into the bath, and after lifting it up and down two or three times, allow it to remain covered by the solution for about two minutes.

To do this neatly, get a strip of glass two or three inches longer than the plate, and about two inches wide; cut off about a quarter of an inch from one end, and cement it on the front of the end from which you cut it; you thus obtain a dipper on which the plate rests, and by holding the other end of the plate, it can be easily plunged in the bath. You then place the plate in the frame, and the frame in the camera, (having previously obtained a good focus;) and by pulling up the slide in front of the plate, you expose for a space of time varying from one to fifteen seconds. We cannot give any rule for the exact length of time, as it depends on the colour of the object, the amount of light shining on it, the quality of that light, and the amount of light which the object reflects, &c., a knowledge of all which must be obtained by practice.

Having closed your slide, you carry the frame into the dark room, and, taking out the plate, develop the picture in the following manner:—Make a solution, consisting of distilled water, 4 oz., pyrogallic acid, 5 grains, strongest acetic acid, 60 minimis (or drops;) dissolve and filter. In applying this solution, hold the plate perfectly level, the collodion side upwards, and pour enough of it on the plate to cover it; in a very short time the picture will be developed. Wash it with water, and pour over it some of the solution of hyposulphate of soda, made thus: water, 1 pint, hyposulphate of soda, 4 oz. Allow it to remain one or two minutes, and after thoroughly washing it all off again, your “negative” collodion picture is finished.

As pyrogallic acid is not to be had in every place,

we give another agent for developing collodion pictures, which answers very well; it is by Mr. Spiller: water, 1 oz., sulphate of iron, 14 grains, nitrate of potash (salt-petre,) 10 grains, acetic acid,  $\frac{1}{2}$  drachm, nitric acid (aqua fortis,) 2 drops; use this instead of the solution of pyrogallie acid, and fix in the same manner.

If, in the process of developing the picture, it appears too quickly, use eight ounces of water instead of four in making the pyrogallie acid solution. By so doing the half tones will be much improved, but the time required will be longer.

**COLOURS FOR CONFECTIONERY, &c.**—These should always be harmless. Liquid cochineal serves for reds, while sap green, Prussian blue, yellow saffron, &c., afford innocent means of colouring sweetmeats, jellies, and liquors. Brandy may be coloured with burnt sugar, and litmus gives a violet tinge.

**COLOURS, VEHICLES FOR.**—Boiled linseed oil, with dryers, serves best for oil paints. Water-colours may be used with gum water, solution of gelatine, or a solution of shellac and borax.

**COLOURS FOR SHOW-BOTTLES.**—Distilled water must be used, and a little more colour made than is requisite to fill the bottles. The solution must be cleared by subsiding, or by filtration; the bottles must be clean and dry. After exposure for some weeks, the liquid generally requires a second filtration.

I. *Blue.*—1. Blue vitriol, 1 lb to each gallon. 2. Add besides 1 lb of alum to each gallon, and sufficient sulphuric acid to strike the colour. 3. Sulphate of indigo, diluted to the required shade. 4. Prussian blue, 6 parts, oxalic acid, 1 part; rub to powder, and dilute with water. 5. *Royal Blue.*—Sulphate of copper,  $\frac{1}{2}$  lb, or nitrate of copper, 3 oz., to each gallon; dissolve; add solution of ammonia to strike the colour. 6. Acetate of copper, 1 part, hydrochloric acid, 3 parts; dissolve in water, add solution of ammonia, q. s. By omitting the acid this is rendered pale blue.

II. *Green*.—1. Add infusion of saffron, or chromate of potash, to any of the blues. 2. Verdigris, 8 oz. to each gallon of water; add nitric or sulphuric acid, q. s. 3. Verdigris, 8 oz., vinegar, 1 quart; dilute with water. 4. To a decoction of turmeric, add verdigris and blue vitriol. 5. Add nitric acid, hydrochlorate of soda or iron, or bichromate of potash, to a solution of sulphate of copper. 6. *Emerald*.—Nitrate of copper, 1½ oz., nitric and hydrochloric acids, of each 2 oz. to each gallon of water. 7. Nickel, 1½ oz., hydrochloric acid, 2 oz., nitrous acid, 1 oz.; mix, and in 24 hours add 1 gallon of water.

III. *Red*.—1. A solution of carmine, or powdered cochineal, in liquid ammonia, and diluted to shade. 2. Cochineal, ½ oz., boiling water, 1 gallon; digest and strain; add ½ oz. sulphuric acid, and 1 gallon of water.—3. *Crimson*.—Iodine, and iodide of potassium, of each 2 drachms, mix with 1 drachm of water; and 4 oz. of hydrochloric acid. 4. *Pink*.—Boiling water, 1 quart, madder root, ½ oz.; mix, cool; add 1 oz. strong ammonia, and filter into 1 or 2 gallons of water.

IV. *Purple*.—1. Verdigris, 1 oz., liquor ammonia, 1 lb., or q. s., water, 6 lbs.; mix. 2. Infusion of logwood, with liquor ammonia. 3. Sugar of lead, 3 oz., cochineal, 1 drachm, water, q. s.

V. *Yellow*.—1. A solution of chromate of potash. 2. Add to the last sulphuric acid, or nitrate of potash, q. s. 3. Decoction of French berries and alum. 4. Gamboge, or annatto, dissolved in liquor of potash; add water, and a little spirit. The quantity of alkali changes the colour to a light or deep orange.

**CONCENTRATED MILK.**—Add sugar to the milk, and evaporate the mixture by a gentle heat.

**CONFECTI0NS**, formerly termed *Electuaries*, are simple medicines, sweetened with sugar, syrup, &c., and mostly used as vehicles for more active remedies. They require to be kept dry and well covered.

*Confection of Almond, L.*—Sweet almonds, 8 oz., powdered gum Arabic, 1 oz., sugar, 4 oz. Macerate the almonds

## CONFECTIONS.

in cold water, remove the skins and dry the fruit. Powder the dry almonds, the gum, and the sugar separately, then mix, and preserve in a well stopped bottle. Only used to prepare almond mixture.

*Confection, (Aromatic) L.*—Cinnamon and nutmeg, of each 2 oz., cloves, 1 oz., cardamom,  $\frac{1}{2}$  oz., saffron, 2 oz., prepared chalk, 16 oz., sugar, 2 lbs., distilled water, a sufficient quantity. Rub the dry ingredients together into fine powder, and preserve the mixture in a close vessel. When required for use, add to each ounce 2 drachms of water, and mix thoroughly. Cordial, astringent, and antacid. Used to prevent diarrhoea, and in various mixtures. Dose, 10 to 60 grains. Incompatible with acids, or acidulous and metallic salts.

*Confection of Cassia, L.*—Prepared cassia, 6 oz., manna, 2 oz., prepared tamarind, 1 oz., syrup of roses, 8 oz. Bruise the manna, dissolve it in the syrup, mix in the tamarind and cassia, and evaporate to the required consistency. Used as a purgative for children only. Dose, 2 to 6 drachms.

*Confection of Opium, L.*—Powdered opium, 6 drachms, long pepper, 1 oz., bruised ginger, 2 oz., caraway, 3 oz., powdered tragacanth, 2 drachms, syrup, 16 oz.—Powder the dry ingredients, and preserve in a close vessel. For use, add hot syrup to the powder, and mix. Nine grains of the mixed powders, or 30 grains of the confection, contain 1 grain of hard opium. Narcotic and aromatic. Used to check diarrhoea, in conjunction with chalk mixture; and administered in flatulent colic. Dose, 15 to 50 grains.

*Confection of Orange, L.*—Fresh orange peel, 1 lb., sugar, 3 lbs. Bruise the peel with a wooden pestle, add the sugar, and beat until mixed. Only used to sweeten medicines, or as a sweetmeat.

*Confection of Pepper, L.*—Black pepper and elecampane, of each 1 lb., fennel, 3 lbs., honey and sugar, of each 2 lbs. Powder the dry ingredients, and preserve in a close vessel. For use, add the honey to the powder, and mix thoroughly. Dose,  $\frac{1}{2}$  to 1 drachm, twice daily, in pills.

## CONFECTIONS.

*Confection of Red Roses, L.*—Fresh red rose petals, 1 lb., sugar, 3 lbs. Bruise the rose petals in a stone mortar, add the sugar, and beat until mixed. Used as confection of dog rose.

*Confection of Dog Rose, L.*—Fruit of the dog rose without the seeds, 1 lb., sugar, 20 oz. Add the sugar gradually to the roses, and beat until mixed. Both are used to give form to pills, and as additions to cough mixtures.

*Confection of Rue, L.*—Fresh rue, bruised caraway, and bay berries, of each 1½ oz., prepared sagapenum, ½ oz., black pepper, 2 drachms, honey, 16 oz., distilled water, a sufficient quantity. Rub the dry ingredients to a fine powder, dissolve the sagapenum by heat in the honey, and water, and mix all intimately by gradually adding the powder. Used as an antispasmodic in children's convulsive fits, and in enemas for colic. Dose, 1 to 3 scruples, in gruel.

*Confection of Scammony, L.*—Scammony, 1½ oz., cloves, ginger, of each 6 drachms, oil of caraway, ½ drachm, syrup of roses, a sufficient quantity. Powder the dry ingredients very finely, and preserve in a well-closed vessel. For use, rub the syrup with the powder, add the oil, and mix all together. Stimulating, cathartic. Dose, 20 to 60 grains. Seldom used.

*Confection of Senna, L.*—Senna, 8 oz., figs, 1 lb., tamarind pulp, cassia, and pulp of prunes, of each ½ lb., coriander, 4 oz., fresh liquorice, 3 oz., sugar, 2½ lbs., distilled water, 3 pints. Rub the senna with the coriander in a mortar, and by a sieve sift 10 oz. Boil together the water, figs, and liquorice, to one-half, and strain.—Evaporate the strained liquor in a water-bath down to 24 oz., add the sugar, the tamarinds, cassia, and prunes, and while cooling stir in the powder, and mix thoroughly.

**CONGREVE MATCHES.**—1. Chlorate of potash, 2 parts, phosphorus, 4 parts, glue, 2 parts, gum Arabic, 7 parts.—Divide the phosphorus in the gum, made into mucilage, and warm, then add the melted glue. Powder the chlorate, moisten it with mucilage, and mix all together. The matches, dipped first in melted sulphur, are, when dry, dipped in this paste, and dried.

2. Phosphorus, 9 parts, gum Arabic and vermillion, of each 16 parts, saltpetre, 14 parts. Divide the phosphorus in urine, by a water-bath, and mix it with the rest in a paste. Dip the matches in, dry, and again dip in thin gum-water, to which some nitre is added.
3. Glue, 8 oz., water,  $\frac{1}{2}$  pint; dissolve by heat; add phosphorus, 3 oz., mix well to a whitish paste; add chlorate of potash, 6 drachms, and 2 oz. of colouring; well mixed, powdered, and wetted to prevent firing. Stir for 10 minutes, and use.

COPAIBA is soluble in alcohol, ether, and oils; when mixed with  $\frac{1}{16}$  of its weight of magnesia, it thickens, and becomes in a few hours nearly solid. It may thus be administered in pills. It is diuretic, stimulant and cathartic. Used chiefly in gonorrhœa.

*Copaiba, Solution of.*—Boil for 15 minutes, water, 7 parts, copaiba, 2 parts, liquor of potash, 3 parts: cool, add nitric ether, 1 part. Draw off the clear liquor from the lower portion of the vessel, avoiding the upper stratum of oil. A substitute for *Franks' Solution*.

*Copaiba Mixture.*—Balsam of copaiba, 1  $\frac{1}{2}$  oz., nitric ether, 1 oz., tineture of henbane, 3 drachms, liquor of potash, 2 drachms, cinnamon water sufficient to make the mixture 8 oz. Dose, 2 table-spoonfuls twice a-day, in gonorrhœa.—*Arnold*.

COPAL is readily dissolved. 1. In the cold, by a mixture of eauoutchoucine and alcohol (0.825) equal parts. 2. When fused by heat it will mix with hot oil, and is thus usually prepared in varnish-making. 3. Camphor,  $\frac{1}{2}$  oz., to highly rectified oil of turpentine or alcohol, 1 quart, enables either to dissolve copal by heat. The first mode is the simplest for experiment on small quantities; the copal, in any case, must only be *coarsely* powdered, as, if too fine, it clings together.

COPPER, NITRATE OF.—Saturate nitric acid with copper; evaporate until the acid flies off; re-dissolve with fresh acid; filter, evaporate, and crystallize. Used in electro-typing, and in making show colours.

*Copper, Oxide of.*—Heat to redness nitrate of copper; it is decomposed, and becomes the oxide, or *protoxide* of copper. Used to prepare oxygen gas.

*Copper, Powdered.*—Immerse zinc into an acid solution of sulphate of copper. The copper will be precipitated in a finely divided state.

*CORAL, (FACTITIOUS.)*—Prepared chalk, coloured with sesquioxide of iron, or rose pink, is sold as powdered coral.

*CORNS.*—Soak the feet in warm water, pare the top of the corn, and proceed to apply one of the following solvents:—

1. Lunar caustic. Moisten the corn, and rub it with the caustic.
2. Nitric acid, applied with a rod or stick.
3. Strong solution of subcarbonate of potash.

The corn is gradually eaten away and disappears. To prevent them, wear easy shoes; and wash the feet frequently with cold water.

*COSMETICS*; external applications to improve the skin, teeth, or hair.

*Skin Cosmetics.*—Ordinary soap with water, is one of the most useful cosmetics that can be applied to the skin. Before the invention of soap many skin diseases were more prevalent than at present; but even yet many persons, especially in lower life, are disgustingly filthy in their persons. Good soap is a ready cleanser of the skin, removing the oily perspiration which mixes with any dirt or dust that may be touched. From the quantity of alkali soap contains it gives a roughness to some sensitive skins, which are better suited with oily soaps, as the Castile, almond, and Naples soaps. For the same purpose, namely, to soften the skin, various articles are used, such as cold cream, milk of roses, camphor balls, and almond paste.

*Wash for the Skin.*—Emulsion of bitter almonds, 3 oz., rose and orange-flower water, of each 4 oz., borax, 1 drachm, tincture of benzoin, 2 drachms; mix.—*Copland.*

*Kalydor, and Gowland's Lotion*, are imitated by emul-

sion of bitter almonds, 1 pint, bichloride of mercury, 5 grains; mix. Applied with a napkin or towel to the face, &c., it removes all blotches and eruptions

*Milk of Roses.*—1. Mix 1 oz. of almond oil with 10 drops of oil of tartar (carbonate of potash, 10 grains) and add a pint of rose-water.

*Almond Soap.*—Blanch and powder 2 oz. of bitter almonds, beat to a paste, with camphor, 1 drachm; add tincture of benzoin, 10 drachms; mix well; then work it up gradually with 1 lb. of good common soap. An excellent softener for the skin, and preventive of chaps. Perhaps nothing superior can be used during the winter for a tender skin. Sometimes called “Lady Derby’s Soap.” For other cosmetics see Index.

**COUGH, POPULAR REMEDIES FOR.**—*Mixtures.*—1. Syrup of poppies, syrup of squills, and paregoric, equal parts; mix. Dose, a teaspoonful when the cough is troublesome. *Dr. Radcliff.*

2. Syrup of poppies, 1 oz., paregoric and tincture of squills, of each  $\frac{1}{2}$  oz., tincture of tolu, 1 drachm; mix. Dose, a teaspoonful when the cough is troublesome.

*Draught.* Laudanum,  $\frac{1}{2}$  drachm, vinegar and honey, each  $\frac{1}{2}$  oz., ipeeaeanha wine, 20 drops; mix, and take at bedtime.

**COTTEREAU’S SOLUTION FOR TOOTHACHE.**—Saturate ether with eamphor, and add a few drops of ammonia.

**COURT PLASTER.**—Brush silk over with a solution of isinglass, in spirit; dry, and repeat several times. For the last coat apply balsam of Peru. Used to close cuts and wounds, by warming it, and applying. It does not wash off until the skin partially heals.

**CRAYONS, DRAWING.**—Dissolve shellae, 1 part, in wood naphtha, 2 parts; mix with this the colouring matter previously stirred up with an equal weight of fine blue clay. Dry on a stove.

*Crayons, Lithographic.*—Soap, 1  $\frac{1}{2}$  oz., tallow, 2 oz., virgin wax, 2  $\frac{1}{2}$  oz., shellac, 1 oz., lamp black,  $\frac{1}{4}$  oz. Melt the wax and tallow until they ignite; while burning,

add the soap, in slices, letting one melt before another is added; then let the ingredients burn until reduced to one-third in volume. Add the shellac, and when it is melted extinguish the flame. Heat linseed oil till it will ignite, light it with paper, and let it burn to one-half; mix the black with this to a thick varnish; then add this varnish to the crayon mixture. Great experience is required to make this chalk well. *Fielding.* Used to draw upon lithographic stones.

*Crayons for Writing on Glass.*—Spermaceti, 4 parts, tallow, 3 parts, wax, 2 parts: fuse together; add minium, 6 parts, potash, 1 part. Mix well, and form into pencils, which may be pointed for use.

*CREAM, COLD (HUDSON's.)*—Oil of almonds, 4 oz., white wax and spermaceti, of each 2 drachms; melt; add rose water, 4 oz., orange-flower water, 1 oz. Used to soften the skin.

*Cream, Crystalline.*—Olive oil, 3 lbs., spermaceti, 4 to 6 oz.; melt, cool, and add essence of bergamot and essence of lemon, of each 6 drachms, oil of cinnamon, 20 drops, otto of rose, 1½ drachm; mix. Fragrant. Used for the hair.

*Cream, Fox's.*—Marrow pomatum and almond oil, of each 2 oz.; dissolve; add, while cooling, 2 drachms of essence of jessamine or bergamot. *Bateman.* Used for the hair.

*Cream, Furniture.*—1. Soft water, 1 gallon, bees'-wax, 1 lb., soap, 4 oz., pearly, 2 oz.; boil and dissolve. Laid on furniture, and polished off with a brush and leather. 2. Bees'-wax, 4 oz., white soap, ½ oz., oil of turpentine, and boiling water, of each 8 oz. Melt the wax in the turpentine, dissolve the soap in the water, and mix the two liquids. *Barwise.*

*Cream, Painters'.*—Nut oil, 6 oz., mastick, 1 oz.; dissolve, add sugar of lead, ¼ oz., ground in oil; mix the whole with sufficient water to make it like cream. Used to lay on paint when unfinished, to prevent it hardening. It is washed off with water and a sponge.

CRICKETS may be destroyed by putting Scotch snuff into their retreats, or using the wafers. See Beetles.

CRIMSON LIQUID FOR TINSEL OR PAPER.—Drop lake is boiled in solution of soda, then allowed to settle for twenty-four hours; and the decanted fluid is mixed with glue or isinglass, and a little sugar. Apply it with a brush.

CRYSTAL MINERAL.—Fused purified nitre.

CUILLEREE ORDINAIRE (UNE.)—A tablespoonful.

CUILLER A BOUCHE (UNE.)—Five drachms.

CUILLER A CAFE (UNE.)—A large teaspoonful,  $1\frac{1}{4}$  drachm.

CUNDELL'S PHOTOGRAPHIC PAPER PROCESS.—A good sheet of Turner's paper is selected, and washed with the following solution:—nitrate of silver, 17 grains, distilled water, 1 oz.; dry the paper, and wash with iodide of potassium, 400 grains, common salt, 100 grains, pure water, 1 pint; when partially dried, the prepared side must be cleared of the potash by floating it on water for five to ten minutes, then dry it. Now prepare a solution of nitrate of silver, 25 grains, glacial acetic acid, 1 drachm, distilled water, 1 oz.; add to some of this an equal quantity of a solution of crystallized gallic acid in cold distilled water, and the gallo-nitrate of silver thus formed is applied to the paper, which is then ready for use, after rinsing in clean water. The gallic acid solution and the gallo-nitrate of silver will not keep long, and should only be made when required. After exposure in the camera, the gallo-nitrate is again applied to develop the picture, which is then washed, and fixed with the solution of hyposulphite of soda.

CURRY POWDER.—A flavouring mixture of spices used in India to season meats with. There are a great variety of recipes extant for the *true* curry powder, all of which differ in the quantities of ingredients. The articles used are similar in all.

Turmeric and coriander seeds, of each 4 oz., black pepper,  $2\frac{1}{2}$  oz., ginger, 14 drachms, cinnamon, mace, and cloves,

each  $\frac{1}{2}$  oz., eardamom seeds, 1 oz., cummin seeds, 2 dr. Cayenne pepper, 1 oz.; powder and mix. *Bateman.*

**CUSTARD POWDER.**—Sago meal in fine flour, colour with turmerie to a cream colour, add bitter-almond powder to flavour, and if preferred, a few drops of oil of cassia. Used with sweetened milk to form extemporaneous custards.

**CUSTARD POWDER.**—Powdered tragacanth, 2 oz., potato starch, 1 lb., eureuma,  $2\frac{1}{2}$  drachms, essential oil of almonds,  $\frac{1}{2}$  drachm, essence of lemon, 1 drachm. Mix, and put up in ouncee paekets. Take one pint of milk, rub up the contents of a paeket with a little of it, boil the remainder with 2 oz. of lump sugar, pour while boiling on the custard, stir it well, and bake.

**CYANIDE OF POTASSIUM.**—Obtained by adding hydrocyanic acid in excess to a concentrated solution of pure potash, evaporating until crystallization commences, and then fusing at a red heat. Employed in electrotyping, and to obliterate the nitrate of silver marking-inks.

**DAFFY'S ELIXIR.**—Resembles the compound tinture of senna, which answers equally well. Purgative, carminative, stimulant. Used in colic, dyspepsia, &c.

**DAHLIA TEST.**—An evaporating strong solution of dahlia petals, into which papers are dipped, and dried for use. Used as a chemical test-paper.

**DAMP WALLS, REMEDY FOR.**—Dissolve gutta pereha in spirits of turpentine, mix with the solution ground white lead, and apply the composition with a brush.

**DANDELION COFFEE.**—Chicory, 1 oz., dried dandelion roots, 8 oz., coffee, 3 lbs.; mix in powder. Said to be tonic and alterative when used as a beverage once or twice a-day. The public are occasionally fond of medicated food, or any novel mixture which is puffed off under a strange name. Pea-meal, wheat-flour, cocoas, coffees, &c., &c., have recently fetched enormous prices when packed up and advertised as newly-discovered articles of surprising efficacy in all disorders, real or imaginary.

**DARRET'S CARMINATIVE LOZENGES.**—Bicarbonate of soda, 2 draehms, refined sugar, 14 oz., oil of peppermint, 4 drops; made into lozenges with mucilage of tragacanth. Used in flatulency, heartburn, &c.

**DEAFNESS, REMEDY FOR.**—Oil of almonds, 1 lb., bruised garlic, 2 oz., alkanet,  $\frac{1}{2}$  oz.; infuse and strain. Applied with a little cotton to the ear.

**DECOCTIONS** differ from infusions only in being boiled. Infusions preserve the volatile principles more effectually than decoctions. Decoctions soon spoil; therefore they are generally prepared only when wanted. They should be strained while hot.

*Decoction of Aloes, Compound, L.*—Extract of liquorice, 7 draehms, earbonate of potash, 1 drachm, extract of aloes, powdered myrrh, and saffron, of each  $1\frac{1}{2}$  draehm, distilled water,  $1\frac{1}{2}$  pint, compound tiniture of cardamoms, 7 oz. Boil the liquorice, potash, aloes, myrrh and saffron, with the water, down to a pint; strain, and add the tiniture.

Antaeid, tonic, mildly cathartie, incompatible with acids or acidulous salts. Dose,  $\frac{1}{2}$  to 2 oz.

*Decoction of Yellow Bark, L.*—Yellow bark bruised, 10 draehms, distilled water, 1 pint. Boil for 10 minutes in a lightly covered vessel, and strain while hot.

*Decoction of Pale Bark, L.*—As Yellow Bark.

*Decoction of Red Bark, L.*—As Yellow Bark. All used as tonics, in doses of 1 to 2 oz. three times a-day.

*Decoction of Barley, L.*—Barley,  $2\frac{1}{2}$  oz., distilled water,  $4\frac{1}{2}$  pints. Clean the barley in water, then boil it with half a pint of water, throw this water away, add the rest (4 pints) first made hot, boil down to two pints, and strain. Emuleent drink in gonorrhœa and fever. Dose, at pleasure.

*Decoction of Barley (Compound) L.*—Decoction of barley, 2 pints, sliced figs,  $2\frac{1}{2}$  oz., fresh liquorice sliced, 5 dr., stoned raisins,  $2\frac{1}{2}$  oz. distilled water, 1 pint. Boil down to two pints and strain. Used as the simple decoction.

*Decoction of Broom (Compound) L.*—Broom, bruised juniper, bruised dandelion, of each  $\frac{1}{2}$  oz., distilled water,

## DECOCTIONS.

1½ pint. Boil to a pint and strain. Diuretic, laxative.  
Dose: 1 to 2 oz., three times daily.

*Decoction of Dandelion, L.*—Bruised dandelion, 4 oz., distilled water, 1½ pint. Boil to a pint and strain. Laxative, diuretic. Dose: at pleasure, in dropsy, jaundice, and liver complaint.

*Decoction of Elm, L.*—Bruised elm bark, 2½ oz., distilled water, 2 pints. Boil to a pint and strain. Tonic, astringent. Dose: 4 to 6 oz. three times a-day.

*Decoction of Galls, L.*—Bruised galls, 2½ oz., distilled water, 2 pints. Boil to a pint and strain. Astringent. Dose: 1 oz. three times a day.

*Decoction of Liverwort, L.*—Liverwort, 5 drachms, distilled water, 1½ pint. Boil to a pint and strain. Dose, 1 to 4 oz. three times a-day

*Decoction of Logwood, L.*—Cut logwood, 10 drachms, distilled water, 1½ pint. Boil to a pint and strain. Dose, 1 to 2 oz., often, as an astringent in diarrhoea, or dysentery.

*Decoction of Madder Root.*—Powder of madder root, 15 grains, water, 1 pint; boil. Take in three portions during the day, for diseases affecting the bones, scrofula, rickets, &c. The madder root is powdered by drying, and grinding in a coffee mill.

*Decoction of Oak Bark, L.*—Bruised oak bark, 10 dr., distilled water, 2 pints. Boil to a pint, and strain. Astringent. Used as a gargle in relaxed or sore throat, and as an injection in piles, &c.

*Decoction of Pareira, L.*—Pareira sliced, 10 drachms, distilled water, 1½ pint. Boil to a pint, and strain. Bitter tonic. Used in chronic catarrh and inflammation of the bladder. Dose: 2 to 4 oz. three times a-day.

*Decoction of Pomegranate, L.*—Pomegranate rind, 2 oz., distilled water, 1½ pint. Boil to a pint and strain. Astringent. Dose: 1 oz. three times a-day, or as an injection, 2 oz. each night and morning.

*Decoction of Pomegranate Root, L.*—Root of pomegranate sliced, 2 oz., distilled water, 2 pints. Boil to a pint, and strain. Used only as an anthelmintic. Dose:

## DECOCTIONS.

1 to 2 oz. every half hour, until a pint has been taken, to be followed by a dose of castor oil.

*Decoction of Poppy, L.*—Bruised poppy, 4 oz., distilled water, 4 pints. Boil for 15 minutes and strain. Anodyne, emollient. Used chiefly as a fomentation to painful parts.

*Decoction of Quince, L.*—Quince, 2 drachms, distilled water, 1 pint. Boil for 10 minutes and strain. Applied externally to sore nipples, chapped lips, hemorrhoids, &c.

*Decoction of Sarsaparilla, L.*—Sarsaparilla, 5 oz., distilled water, 4 pints. Boil to 2 pints and strain. Alterative. Dose: 2 to 7 oz., twice or three times a-day.

*Decoction of Sarsaparilla (Compound) L.*—Boiling decoction of sarsaparilla, 4 pints, sassafras sliced, guaiacum wood rasped, and fresh liquorice root bruised, of each 10 drachms, mezereon, 3 drachms. Boil for 15 minutes and strain. Alterative. Dose: 1 to 8 oz., twice or three times a-day.

*Decoction of Senega, L.*—Senega, 10 drachms, distilled water, 2 pints. Boil to a pint and strain. Acerid, stimulant, expectorant. Dose: 1 to 3 drachms.

*Decoction of Starch, L.*—Starch, 4 drachms, water, 1 pint. Rub the starch with the water gradually added, and boil for a short time. Used chiefly as a vehicle for enemas.

*Decoction of Tormentil, L.*—Bruised tormentil, 2 oz., distilled water, 1½ pint. Boil to a pint and strain. Powerfully astringent. Used in dysentery and diarrhoea. Dose: 1 to 3 oz.

*Decoction of Whortleberry, L.*—Whortleberry, 1 oz., distilled water, 1½ pint. Boil to a pint and strain. Diuretic, astringent. Used in diseases of the bladder. Dose: 1 to 3 oz.

*Decoction of Winter-Green, L.*—Winter-green, 1 oz., distilled water, 1½ pint. Boil to a pint and strain. Used in scrofula, dropsies, bladder and calculous disorders. Dose: 1 to 2 oz.

*Decoction of Woody Nightshade, L.*—Woody nightshade,

10 drachms, distilled water, 1½ pint. Boil to a pint and strain. Used in skin diseases and in rheumatism. Dose: ½ to 4 oz.

**DENTIFRICE.**—An application to the teeth for the purpose of cleaning them; usually in the form of powder, paste, or wash, as in the following receipts.

*Oriental Tooth Paste.*—Pumice stone, 1½ oz., alum, ½ dr., bitartrate of potash, 1½ oz., cochineal, 2½ scruples, bicarbonate of potash, 1½ drachm, orris, 1½ oz., syrup, 3½ oz., essence of lemon, 1 drachm, oil of cloves and essence of bergamotte, of each ½ drachm, otto of roses, 8 drops; mix.—*Turner.*

*Tincture for the Teeth.*—Spirit of nutmegs, 1 drachm, tincture of rhatany, 2 drachms, compound tincture of cardamoms, 3 drachms, compound spirit of lavender and spirit of cinnamon, of each ½ drachm, otto of roses, 3 drops; mix.—*Bateman.*

For other preparations, see Index.

**DEPILATORIES.**—Preparations to remove hair from the human skin, usually applied to superfluous hair on the forehead, &c., and to women's beards, and used instead of the razor by some foreign Jews. All these applications are more or less dangerous or severe, and must be cautiously used; the active ingredients, such as arsenic, quicklime, &c., being either absorbed by the skin, or likely to remove it along with the hair. They do not cause a permanent removal of hair, but often leave deep marks.

*Delcroix's Poudre Subtile.*—Orpiment, (sulphuret of arsenic) 1 part, quicklime and starch, of each 11 parts; powder and mix. Shave the hair off, apply the powder, mix to a paste with warm water, and wash it off when it becomes dry.

*Rayer's Depilatory.*—Lime, 1 oz., carbonate of potash, 2 oz., charcoal, 1 drachm; mix. Used as above.

*Redwood's Depilatory.*—Strong solution of sulphuret of barium; add starch to form a paste. Apply for a few minutes, and remove it with the back of a knife.

Many others might be added, but the ingredients are

similar in all, with slight variation in the quantities employed.

**DETERGENT, COLLIER'S.**—Liquor of potash, 2 drachms, rose water,  $5\frac{1}{2}$  oz., spirit of rosemary,  $\frac{1}{2}$  oz.; mix. Used to free the head from scurf, by brushing a little in occasionally with a *stiff* brush.

**DERBYSHIRE'S EMBROCATION FOR SEA-SICKNESS.**—Castile soap and opium, of each 2 oz., extract of henbane, 2 drachms, mace,  $\frac{1}{2}$  drachm, proof spirit, 1 quart. Digest fourteen days, filter, and add liquor ammonia, 1 oz.

**DEXTRINE.**—See British gum.

**DIAPENTE.**—Equal parts of gentian, turmerie, bay berries and mustard. Used as a tonic by farriers.

**DISINFECTANTS.**—Substances which remove or destroy offensive effluvia. Chlorine, or its preparations of lime and soda, are powerful disinfectants of the air of apartments, which are at the same time ventilated. Steam, or the heat of a stove, is used for dirty clothes in some of the workhouses and hospitals. Quicklime or whiting is useful in covering walls. The sulphates of iron or lime will deodorize cess-pools; so does chloride of lime or soda. Suitable and efficient ventilation, with cleanliness, are the best disinfectants known.

**DOORS, CREAKING.**—Rub the hinges with soap or oil.

**DRAWINGS, TO FIX.**—Wash with *well-skimmed* milk, weak solution of isinglass, or rice water.

**DRAWINGS AND PHOTOGRAPHS, TO MOUNT.**—India-rubber paste is to be made a little thinner than that which is sold at the Macintosh shops, and spread as thinly as possible on the back of the drawing, and on the mounting board. The best way of doing this is to put it roughly on, and then draw over the surface the edge of a piece of plate glass ground smooth, which pushes all superfluous paste before it, and leaves the paper with little more than a stain upon it. Both the drawing and board are now to be dried at the fire until all smell of the naphtha or turpentine used to dissolve the caoutchouc has gone off. When quite cold, the two fresh

surfaces of caoutchoue are brought together, and adhere perfectly, much more so, indeed, than if brought together moist. Any superfluous caoutchoue is now rubbed off the edges of the drawing either with the finger or a clean piece of India-rubber. The best solvent for the caoutchoue is a mixture of two-thirds naphtha and one third eamphine, or any highly rectified turpentine. Naphtha alone dries so quickly, that it is difficult to cover a large surface smoothly.

**DROPS, JESUITS'.**—1. Gum guaiacum, 7 oz., balsam of Peru, 4 drachms, sarsaparilla, 5 oz., rectified spirit,  $2\frac{1}{2}$  lbs.; digest for 14 days, and strain.

2. Balsam of copaiba, 6 oz., gum guaiacum, 1 oz., Chio turpentine,  $\frac{1}{2}$  oz., subearbonate of potash,  $\frac{1}{2}$  oz., cochinical, 1 drachm, rectified spirit, 1 quart. Alterative, anti-venercal.

**DROPS, BATEMAN'S PECTORAL.**—Castor, 1 oz., oil of aniseed, 1 drachm, camphor, 5 drachms, cochinical,  $1\frac{1}{2}$  dr., opium, 6 drachms, treacle, 1 lb., proof spirit, 1 gallon; digest 7 days, and strain. Used in coughs.

**DROPS, SCOURING.**—Oil of lemons, and spirit of turpentine, both recent, of each equal parts. Used to remove grease.

**DRUGGISTS' SHOW-COLOURS FOR WINDOWS, &c.—**

**Blue.**—1. Sulphate of copper, 1 oz., sulphuric acid,  $\frac{1}{2}$  oz., water, 10 oz.

2. Dissolve nickel in diluted nitric acid, add ammonia in excess, and dilute with water.

3. As No. 2, using sulphuric, instead of nitric acid.

4. Ammonio-sulphate of copper, ammonio-nitrate of nickel (No. 2,) and water.

5. Prussian blue, 10 grains, oxalic acid, 20 grains, water, 16 oz.

**Green.**—1. Sulphate of copper, 2 oz., chloride of sodium (common salt,) 4 oz., water, 20 oz.

2. Nickel, 1 oz., nitric or sulphuric acid, 6 oz.; dissolve, and add water, 5 pints.

3. To a solution of sulphate of copper add nitric acid sufficient to produce the colour desired.

4. Add bichromate of potash to a solution of sulphate, or ammonio-sulphate of copper.

5. Dissolve verdigris in acetic acid, and dilute with water.  
*Lilac*.—1. Dissolve zaffre (impure oxide of cobalt) in hydrochloric acid, filter, add carbonate of ammonia in excess, then add ammonio-sulphate of copper, or ammonio-nitrate of nickel, (Blue, No. 2,) q. s.

*Orange*.—A solution of bichromate of potash, with or without the addition of hydrochloric or sulphuric acid.

*Pink*.—1. Dissolve oxide of cobalt, 2 oz., in hydrochloric acid, 6 oz., filter, add carbonate of ammonia in excess, then add liquor of potash, 1 oz., and dilute as required.

2. Use the nitrate of cobalt as above.

*Purple*.—1. Sulphate of copper, 1 oz., carbonate of ammonia, 1 oz., water,  $2\frac{1}{2}$  pints.

2. Add to the above a little of Pink solution No. 1.

*Red*.—1. Macerate cochineal or carmine in ammonia, and dilute.

2. Dissolve madder lake in solution of carbonate of ammonia.

*Violet*.—Ammonio-sulphate of copper dissolved in water, with Pink solution No. 1, q. s.

*Yellow*.—Bichromate of potash,  $\frac{1}{2}$  oz., carbonate of potash,  $\frac{1}{2}$  oz., water, 16 oz.

*DRYERS*.—1. White lead, 2 lbs., white copperas and sugar of lead, each 1 lb.; grind in boiled oil to a paste. Used in addition to all mixed oil paints, except white lead, to make them dry. White lead becomes discoloured with it.

2. *Patent*.—Dried white copperas, 15 lbs., sugar of lead, 4 lbs., litharge, 7 lbs. Mix with boiled oil and pass through a paint-mill 3 or 4 times. Then mix 1 cwt. of Paris white with  $\frac{1}{2}$  cwt. of Dutch lead (barytes) and boiled oil to form a paste; pass them through the mill, mix the whole, and grind once more. Product: 2 cwt. Used to mix with oil paint to make it dry quicker.

*DRYING OIL*.—Linseed oil boiled with a little litharge and umber. Used to mix oil-colours.

*DUBBING*.—Sheep-skin cuttings, boiled in common cod oil.—Used to soften leather, boots, &c.

**DUPUYTREN'S EYE SALVE.**—Nitric oxide of mercury, 10 grains, sulphate of zinc, 20 grains, lard 2 oz.; mix. Applied as a stimulant in diseases of the eye. The ointment of nitrate of mercury is substituted for this.

*Dupuytren's Pomade.*—A preparation of lard or marrow, 4 oz., with tincture of cantharides,  $\frac{1}{2}$  drachm; as a stimulant. Applied to the head in baldness, after washing the hair from seurf.

**DUTCH DROPS.**—The genuine drops are the residue after the distillation of oil of turpentine. The imitations disposed of here are prepared thus. 1. Oil of turpentine, tincture of guaiacum, and nitric ether, of each 1 oz., oils of amber and cloves, of each 15 drops; mix. 2. Linseed oil, 1 quart, rosin, 2 lbs., sulphur, 1 lb.; boil until mixed, add oil of turpentine, 1 pint, liquor ammonia, 50 drops; mix. Diuretic, stimulant, detergent.

**DYES, HAIR.**—Hair-dyes colour the hair only as far as the roots, and require to be applied as frequently as the growth of hair shows both false and real colour.

1. *Dr. Hanman's*—Litharge,  $\frac{1}{2}$  oz., quicklime,  $3\frac{1}{2}$  oz., starch, 2 oz.; mix in powder. For use, mix in warm water, and rub on the hair to the roots. Cover the head with oil-skin or wadding for the night.
2. *Orfila's*—Litharge, 6 parts, quicklime, 5 parts, starch, 1 part; mix, and apply as above.
3. *Spencer's*—Sap green,  $\frac{1}{2}$  drachm, nitrate of silver, 1 drachm, hot water, 1 oz.; dissolve. Combed in the hair for use.
4. *Chevellier's*—Mix 5 drachms of fresh slaked lime with  $1\frac{1}{2}$  oz. of water; strain and bottle. Dissolve 5 drachms of acetate of lead in water, add enough slaked lime to saturate the acetic acid, wash the precipitate, and mix it with the milk of lime.
5. *Warren's*—Lime, 4 oz., white lead,  $\frac{1}{2}$  oz., litharge, 1 drachm; mix in powder. Used with a sponge and water, to dye black, or with milk, to dye brown.
6. *Delcroix's*.—Acetate of lead, 2 oz., prepared chalk, 3 oz., quicklime, 4 oz. As No. 1.
7. *Cattel's*—Nitrate of silver, 11 drachms, nitric acid, 1

## HAIR DYES.

drachm, sap green, 3 drachms, gum Arabie, 1 drachm, distilled water, 1 pint; mix.

8. Brush the hair with nitrate of silver, 1 drachm, distilled water, 1 oz. Then with a weak solution of hydrosulphuret of ammonia, which at once blackens it.
9. *Pomade*.—Lard mixed with nitrate of bismuth. Said to turn the hair black.
10. Lard and wax melted to a proper consistence, and mixed with ivory black or colours. Used for whiskers, eyebrows, &c.
11. Silver, 2 drachms, iron filings,  $\frac{1}{2}$  oz., nitric acid, 1 oz., distilled water, 8 oz.; digest and preserve the liquor. Apply with a brush.
12. Nitrate of silver and sulphate of iron, of each 1 drachm, distilled water, 1 pint; mix.
13. *Chinese*.—Nitrate of silver, 2 drachms, sap green,  $1\frac{1}{2}$  dr., oxide of bismuth, and rust of iron, (*ferri rubigo*.) of each  $\frac{1}{2}$  drachm. Dissolve the green in  $\frac{1}{2}$  pint of distilled water, and add the rest. For use, apply with a toothbrush.

Other dyes are similar to the above, and known by various singular titles, in order to *take*, as essence of Tyre, eau de Egypt, eau de China, Greek or Grecian water, &c., all being preparations of silver. The solution of silver stains the *skin* as well as the hair; the caustic earths act as depilatories. The silver solutions are therefore most generally used, being carefully applied to the *hair only*. La Forest's cosmetic wash, the pyrogallie stain, &c., differ little from common ink, which is cheaper, and equally effectual. The hair must always be washed free from scurf before applying any dye.

**DYE, IVORY, to.—Red.** 1. Soak it in a weak solution of aqua-fortis, and immerse it in liquid carmine.

2. Boil it with Brazil wood, 1 lb., and water, 1 gallon, then add alum, 4 oz., and boil again.

**Black**.—Dip in a solution of nitrate of silver and expose to the light; or, first boil in galls and logwood, and then in iron liquor.

*Green*.—Dip in a solution of verdigris, to which a little aquafortis is added, or verdigris and vinegar.

*Purple*.—Boil in a decoction of logwood, then add alum, 1 oz., to each quart, and boil again.

*Yellow*.—Steep in a saturated solution of orpiment in ammonia.

*Blue*.—Steep in a solution of salt of tartar and sulphate of indigo.

**EATON'S STYPTIC**.—A spirituous solution of sulphate of iron, coloured.

**EAU (French for WATER.)**—Various liquors are so called. In perfumery it is applied to fragrant solutions of oil, in spirits and distilled waters, of odorous plants. The same title is adopted for cordial liquors.

**EAU D'AMBRE**.—Tincture of musk-seed, 1 lb., essence of ambergris, 1 oz., tincture of musk, 1 oz., rectified spirit, 2 lbs., orange-flower water, a sufficient quantity; mix, and filter.

**EAU D'ANGE**.—1. Myrtle flowers, 16 oz., rectified spirit, 1 gallon; distil in a water-bath.

2. Myrtle flower-water.

**EAU DE BOUQUET**.—1. Spirit of rosemary and essence of violets, of each 1 oz., essence of bergamotte and jasmine, of each 1 drachm, oils of verbena and lavender, each 1 scruple, eau de rose,  $\frac{1}{2}$  pint, orange-flower water, 1 oz., rectified spirit, 2 pints; mix, digest, and filter.

2. Honey-water, 2 oz., tincture of cloves, 1 oz., tinctures of calamus, of lavender, and of long cyprus, each  $\frac{1}{2}$  oz., eau sans parcellle, 4 oz., spirit of jessamine, 9 drachms, tincture of orris, 1 oz., tincture of neroli, 20 drops; mix, and filter.

3. English oil of lavender, oil of cloves, and oil of bergamotte, of each 2 drachms, otto of roses, and oil of cinnamon, of each 20 drops, essence of musk, 1 drachm, rectified spirit, 1 pint; mix.

**EAU DE COLOGNE**.—1. Essence of bergamotte, 40 drops, essence of lemon, 45 drops, oil of rosemary, 6 drops, oil

of orange, 22 drops, neroli, 12 drops, essence of musk, 1 drop, rectified spirit, 6 oz.; mix, and filter.

2. Oils of bergamotte, lemons, and cedrat, of each 3 oz., oils of rosemary, lavender, and neroli, of each  $1\frac{1}{2}$  oz., oil of cinnamon, 6 drachms, rectified spirit, 3 gallons, spirit of rosemary, 1 quart, compound spirit of balm (eau de melisse de Carmes,) 3 pints; digest for 8 days, and distil 3 gallons.—*Paris Codex*.
3. Essence of bergamotte, 6 drachms, of lemon,  $2\frac{1}{2}$  drachms, oils of neroli, lavender, and rosemary, of each 1 drachm, oils of orange and nutmeg, of each 2 drachms, essence of cedrat,  $\frac{1}{2}$  oz., essence of millefleurs, and of roses, of each  $2\frac{1}{2}$  drachms, rose water, 1 lb., rectified spirit, 6 lbs.
4. Oil of oranges,  $\frac{1}{2}$  oz., essences of bergamotte and lemon, and oil of lavender, of each 2 drachms, oil of rosemary, 1 drachm, oil of thyme, 20 drops.
5. Grape spirit, 3 gallons, oil of neroli,  $1\frac{1}{2}$  oz., oil of rosemary and of bergamotte peel, of each 1 oz., oil of orange and citron peels, of each  $2\frac{1}{2}$  oz.

**EAU DE LAVANDE.**—1. Mitcham oil of lavender, 8 oz., essence of bergamotte,  $1\frac{1}{2}$  oz., essence of musk, 4 oz., rectified spirit, 2 gallons; mix. Used by Her Majesty.

2. Oil of lavender, oil of bergamotte, of each 3 drachms, otto of roses, and oil of cloves, of each 6 drops, musk, 2 grains, oil of rosemary, 1 drachm, honey, 1 oz., benzoic acid, 2 scruples, rectified spirit, 1 pint, distilled water, 3 oz.—*Pereira*.

**EAU DE MARESCHALE.**—Grain musk and ambergris, of each 20 grains, oils of bergamotte, lavender, and cloves, of each 1 oz., oil of sassafras, 10 drops, oil of origanum, 20 drops, rectified spirit, 2 quarts; mix.

**EAU DE MILLEFLEURS.**—Spirit of cummin seed, oils of sassafras and rosemary, of each 10 drops, oil of lavender, and otto of roses, of each 2 drachms, neroli,  $\frac{1}{2}$  drachm, oils of pimento and cloves, of each 20 drops, essence bergamotte, 4 drachms, oil of orange, 1 drachm, essence of lemon, 8 oz., vanilla, 1 scruple, elder-flower water, 4 oz., rectified spirit, 30 oz.; mix and filter.

2. Rose and orange flower water, of each 4 oz., oil of cloves and English oil of lavender, of each 1 drachm, oil of bergamotte, 2 drachms, musk, 2 grains, spirit of wine, 1 pint; mix. Digest a week, and add a drachm of essence of musk.—*Bateman.*

**EAU DE LAVANDE AUX MILLEFLEURS.**—Eau de lavande, eau de millefleurs, of each 2 oz.; mix and filter.

**EAU SANS PAREILLE.**—1. Musk, 10 grains, eivet, 5 grains, balsam of Peru, 12 grains, oil of cloves, 4 drops, oil of rhodium, 2 drops, salt of tartar,  $\frac{1}{2}$  drachm, rectified spirit, 2 oz.; digest and filter.—*Bateman.*

2. Rose and orange waters, of each 4 oz., oil of cloves, and English oil of lavender, of each 1 drachm, oil of bergamotte, 2 drachms, musk, 2 grains, spirit of wine, 1 pint; mix. Digest a week, and add 1 drachm of essence of musk.—*Bateman.*

**EAU DE MELISSE DES CARMES.**—Fresh balm flowers, 24 oz., fresh lemon-peel, 4 oz., cinnamon cloves and nutmeg, of each 2 oz., coriander seed and dried angelica-root, of each 1 oz., rectified spirit, 8 lbs.; maceerate for 8 days, and distil in a water bath to dryness.—*Paris Codex.*

**EAU DE PORTUGAL.**—Oil of orange peel, 24 drops, of lemon peel and of bergamotte, of each 4 drops, of lemon grass and otto of roses, of each 1 drop, spirit (60 o. p.) 2 oz.

**EAU DE VIE ALLEMANDE.**—Compound tinetur of jalap.

**EFFERVESCENT MAGNESIA.**—Carbonate of magnesia, 1 part, sulphate of magnesia, bicarbonate of soda, tartrate of potash and of soda, tartarie acid, of each 2 parts; dry by heat and mix. Dose: one teaspoonful in a glass of water.

**EGGS, TO PRESERVE.**—Lime, 1 bushel, salt, 2 lbs., cream of tartar,  $\frac{1}{2}$  lb., water to make a liquid in which an egg will float. Eggs may be preserved in this solution for two years.

**ELDER FLOWER WATER.**—Elder flowers, 9 lbs., water, 4 gallons; draw over 3 gallons by distillation, and add rectified spirit, 3 oz.

**ELIXIR.**—A name for compound tinetures.

*Elixir, Daffy's.*—1. (*Dicey's*) Senna, 1 lb., guaiaeum shavings, dried clecampane root, aniseed, earraway seed, coriander seed, and liquorice root, of each  $\frac{1}{2}$  lb., stoned raisins, 2 lbs., proof spirit, 9 quarts. Digest 14 days, and strain.  
 2. (*Swinton's*) Jalap, 3 lbs., senna, 1 lb., coriander and earraway seeds, liquorice root, and clecampane root, of each 4 oz., rectified spirit and water, of each 1 gallon. Purgative, stimulant.

The compound tiniture of senna answers every purpose for which this elixir is used.

*Elixir, Radcliff's.*—Aloes, 6 drachms, cinnamon, zedoary, and cochineal, of each  $\frac{1}{2}$  drachm, rhubarb, 1 drachm, syrup of buckthorn, 2 oz., proof spirit, 16 oz., water, 5 oz.—*Dr. Paris.* Purgative, stomachic.

*Elixir, Squires'.*—Opium, 2 oz., camphor and cochineal, of each  $\frac{1}{2}$  oz., sweet fennel, 1 drachm, tiniture of serpentaria, 10 oz., spirit of aniseed, 1 gallon, water, 1 pint; mix. Stimulant, anodyne.

*Elixir, Stoughton's.*—Gentian, 36 oz., serpentaria, 16 oz., dried orange-peel, 24 oz., sweet flag, 4 oz., rectified spirit and water, of each 6 gallons, old measure. Stomachic.

*Elixir of Roses.*—Cloves, 1 drachm, cinnamon, 3 oz., ginger, 2 oz., spirit,  $2\frac{1}{2}$  pints, oil of orange, 1 drachm, otto of roses, 15 drops, essence of peppermint, 1 oz.; digest 14 days, and filter. Used to clean the teeth.

*Elixir de Vie.*—Compound tiniture of aloes.

**EMBROCATION, GUESTONIAN.**—Olive oil and oil of turpentine, of each  $1\frac{1}{2}$  oz., dilute sulphuric acid, 3 drachms; mix. Applied in rheumatic cases.

**EMBROCATION, ROCHE'S.**—Sweet oil, 2 oz., oil of amber, 1 oz., oil of cloves, 1 drachm. Formerly used in hooping-cough.

**EMPLASTRUM CEPHALICUM.**—Plaster of opium.

**EMULSION.**—An admixture of oil and water by some substance which combines them. 1 drachm of mucilage of gum Arabie, or 1 oz. of almonds, or an egg, will

form an emulsion, with 1 oz. of water and 2 drachms of any oil.

*Emulsion of Gum.*—Sweet almonds blanched, 10 drachms, white sugar, 5 drachms, mucilage, 3 oz., water, 1 quart. Used in coughs, either alone or combined with other medicines.

*Emulsion of Oil of Almonds.*—Oil of almonds, 3 drachms, mucilage and syrup, of each  $\frac{1}{2}$  oz., rose water, 1 oz., distilled water, 3 to 4 oz.; mix.

The emulsions of the pharmacopœia are included under the head of Mixtures.

**ENEMAS.**—These should generally be administered at a temperature of 94 or 96° F. The quantity for an adult should range from  $\frac{1}{2}$  to  $\frac{3}{4}$  of a pint; for an infant 1 oz., and medium quantities according to age. The active ingredient must be proportioned according to the effect it may have on the patient; and drugs such as opium, &c., should never be used for infants.

*Enema of Aloes, L.*—Aloes, 2 scruples, carbonate of potash, 15 grains, decoction of barley, 10 oz. Mix, and rub them together. Used to dislodge ascarides, and as a stimulant in constipation.

*Enema of Assafœtida, L.*—Prepared assafœtida, 1 dr., decoction of barley, 10 oz. Rub the assafœtida with the decoction gradually added, until thoroughly mixed. Used to expel wind and empty the bowels in the constipation of hysterical women.

*Enema of Colocynth, L.*—Extract of colocynth,  $\frac{1}{2}$  drachm, soft soap, 1 oz., water, 1 pint. Mix and rub together. Used in constipation and colie.

*Enema of Opium, L.*—Tincture of opium, 30 drops, decoction of starch, 4 oz.; mix. Used as an anodyne for irritable bowels.

*Enema of Tobacco, L.*—Tobacco, 1 scruple, boiling water, 10 oz. Macerate 1 hour, and strain. Used in cases of hernia, lead colic, obstructed bowels, &c. Its use is always dangerous.

*Enema of Turpentine, L.*—Oil of turpentine, 1 oz., the yolk of an egg, decoction of barley, 19 oz. Rub the oil

with the yolk, and add the decoction. Employed in worm cases, in tympanitis, and puerperal peritonitis.

**ERGOT.**—The diseased production of rye. On some occasions when the grain has been spurred or covered with ergot, it has caused death frequently to the partakers. Medicinally, it is administered to contract the uterus in labour, and it is very powerful in this case. The active property appears to reside in the oil, which is taken up by hot water, (tea, &c.,) alcohol and ether, and these preparations are generally administered uncombined with other medicines. Powdered ergot is given in repeated doses of 10 to 20 grains, or in one dose of  $\frac{1}{2}$  dr., in which case it generally acts in less than 20 minutes.

*Ergot, Ethereal Tincture of, L.*—Powdered ergot, 15 oz., ether, 2 pints; macerate 7 days, express and strain. Dose: 15 to 60 drops, according to the object in view.

*Ergot, Tincture of, D.*—Powdered ergot, 8 oz., proof spirit, 2 pints; macerate 14 days, strain, express, and filter. Dose: 15 drops to 2 drachms, as required.

**ESCHALOT WINE.**—Bruised shallots, 3 oz., sherry wine, 1 pint; infuse 10 days, and strain. One ounce of scraped horse-radish, and 1 drachm of thin lemon-peel may be added. Used in cooking, as a relish.

**ESPRIT (French for SPIRIT.)**—A term applied to spirituous perfumes.

*Esprit de Bergamotte.*—Essence of bergamotte, 5 oz., essence of ambergris, 2 oz., essence of musk,  $\frac{1}{2}$  oz., oil of verbena, 2 drachms, rectified spirit, 1 gallon; mix.

*Esprit de Rose.*—Otto of roses,  $\frac{1}{2}$  drachm, rectified spirit, 1 quart; dissolve, and filter if required.

**ESSENCE.**—A concentrated preparation of any substance in perfumery or medicine, usually prepared with highly-rectified spirit. In perfumery it should be colourless, and void of peculiar scent or taste. Essences of allspice, aniseed, caraway, cinnamon, fennel, nutmeg, pennyroyal, peppermint, rosemary, and spearmint, are all prepared by dissolving 1 oz. of the oil in 9 oz. of rectified spirit. When weaker than this they are called

## ESSENCES.

*spirits*, and are prepared of the strengths directed in the *pharmacopœia*.

*Essence of Ambergris*.—1. Generally the simple tiniture of ambergris, 1 drachm to 3 oz. of spirit.

2. (*Compound*) Ambergris, 1 drachm, eivet, 15 grains, musk, 30 grains, carbonate of potash, 20 grains; mix, and add oil of cinnamon, 10 drops, oil of lavender, 2 drops, oils of rhodium, of neroli, and otto of roses, of each 6 drops, rectified spirit, 6 oz.; digest and filter.

3. Ambergris, 2 oz., bladder musk, 1 oz., spirit of ambrette, 1 gallon; digest and filter.

*Essence of Anchovies*.—1. Beat 1 lb. of anchovies to a paste, and pulp them through a sieve; cover the bones, &c., with 1 pint water, and boil them gently; strain, add the liquor to the fish, and mix with flour sufficient to make a paste. Flavour with salt, Cayenne, and mushroom catsup to taste, and, if required, colour with bole, annatto, or infusion of cochineal. The colouring is generally better left out.

2. Powdered sweet almonds, 6 oz., anchovies, 8 lbs., salt, 2½ lbs., nitre, 6 oz., Cayenne, ½ oz., bole, ½ oz., water, 2 gallons. Proceed as above in boiling the fish, and add the other ingredients, using sufficient gum tragacanth to thicken it, if desired more solid.

*Essence d'Ambrette*.—Bruised musk seed, 16 oz., rectified spirit, 3 pints; digest and filter.

*Essence de Bouquet*.—Triple extract of roses, 1 pint, extract of ambergris, 2 oz., extract of orris, 8 oz., otto of lemons, 2 drachms, otto of bergamotte, 1 oz.; mix.

*Essence of Bitter Almonds*.—Essential oil of almonds, 1 part, rectified spirit, 20 parts. Used to flavour wine, cordials, liquors, perfumery, pastry, &c. It is *poisonous* in large quantity, and, having a strong taste, *very little* serves to impart flavour. When too much is used in liquors, &c., nothing but reducing with fresh liquor will cover the taste, and it becomes disagreeable from its strength. One drop of the volatile oil of almonds serves for *four doses* in medicine.

*Essence of Cayenne*.—1. Cayenne, ½ oz., brandy, ½ pint digest 14 days, and strain. Used in cookery.

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2. (*Concentrated*) Capsules of capsicum bruised, 3 lbs., rectified spirit, 1 gallon; digest 14 days and filter. Used in dispensing, and for producing soluble Cayenne pepper.

*Essence of Cedar.*—Otto of cedar,  $\frac{1}{2}$  oz., triple extract of roses, 2 oz., rectified spirit, 10 oz.; mix. An excellent dentifrice.

*Essence of Ergot of Rye.*—Bruised ergot, 1 oz., boiling water, 2 fluid ounces; infuse for twenty-four hours, and add rectified spirit,  $1\frac{1}{2}$  oz. Digest ten days, and filter.  $1\frac{1}{2}$  fluid drachms are equal to half a scruple of the powder.

*Essence of Ginger and Chamomile.*—Tincture of ginger, 15 oz., essence of ginger, 3 oz., compound tincture of gentian, 9 oz., oil of chamomile,  $\frac{1}{2}$  drachm; mix. Tonic, stomachic.

*Essence of Ginger.*—1. Sliced ginger, 6 oz., rectified spirit, 12 oz., water and lump-sugar, of each 4 oz., cardamom seeds, 2 drachms; macerate 21 days and filter, or proceed by percolation.

2. Ginger, 1 lb., cloves, 4 oz., Cayenne, 2 oz., rectified spirit, 1 pint, proof spirit, 2 pints; macerate 14 days and filter.

3. Ginger, 12 lbs., rectified spirit,  $2\frac{1}{2}$  gallons; digest 14 days, express, strain, and distil until reduced to 1 gallon. Filter. Quality, very fine.

*Essence of Camphor.*—1. Camphor, 1 oz., rectified spirit, 9 oz., by weight; dissolve. 20 drops to  $7\frac{1}{2}$  drachms of distilled water make about 1 oz. of solution of camphor.

2. (*Compound*) Camphor,  $1\frac{1}{2}$  oz., rectified spirit, 4 oz.; dissolve, and add tincture of myrrh,  $\frac{1}{2}$  oz. Use 50 drops to 1 pint of water.

*Essence for Smelling Bottles.*—Essence of ambergris, 1 oz., otto of roses, and oil of lavender, of each 20 drops, essence of bergamotte, 2 drachms; mix, and add 5 oz. of the strongest solution of ammonia. Fragrant, refreshing.

*Essence of Flowers.*—Essence of jasmine, 2 drachms, otto of rose, and essence of ambergris, of each 20 drops, oil of cinnamon, 1 drop, essences of citron, of cédrat, of

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lemon, of orange, of each 4 drops, oil of neroli, 10 drops, tineture of orris, 4 oz., water, 1 oz., rectified spirit, 8 oz.

*Essence of Violets.*—1. Orris root, 2 oz., rectified spirit, 8 oz.; digest, express, and filter, or proceed by percolation.

2. Alcoholic extract of cassie, 1 pint, esprit de rose, tineture of orris and of tuberuse, of each  $\frac{1}{2}$  pint, oil of almonds, 3 drops.

*Essence of Verbena.*—1. Oil of verbena, 1 drachm, rectified spirit, 1 oz.; mix, and add essenee of vanilla, 10 drops.

2. Oil of lemon grass, 3 drachms, of lemon peel, 2 oz., of orange peel 4 drachms, spirit, one pint; mix and filter.

*Essence of Peppermint.*—Oil of peppermint, 1 oz., rectified spirit, 1 oz., carbonate of magnesia,  $\frac{1}{2}$  oz., water,  $7\frac{1}{2}$  oz. Mix the oil and magnesia intimately, put them in the filter, pour on the spirit, and afterwards the water. Mixes with water; it may be filtered again, if not quite clear.

*Essence of Civette.*—Civet, 1 oz., spirit of wine or spirit of ambrette, 1 pint; mix. Fragrant.

*Essence of Cubebs.*—Ground cubebs, 4 lbs., rectified spirit, 1 gallon. Digest 14 days, express, and filter.

*Essence for Headache.*—Oil of lavender, 1 drachm, eamphor, 1 oz., liquor of ammonia, 3 oz., spirit, 1 pint, dissolve. Fragrant.

*Essence of Lilac.*—Alcoholic extract of tuberuse, 20 oz., of orange flowers, 5 oz., extract of civet,  $\frac{1}{2}$  oz., otto of almonds, 3 drops.

*Essence of Magnolia.*—Alcoholic extract of orange flowers, 2 oz., of roses, 4 oz., of violets and tuberuse, of each 1 oz., oil of citron, 20 drops, essential oil of almonds, 1 drop.

*Essence of Musk.*—1. Finest musk,  $1\frac{1}{4}$  oz., civet,  $\frac{1}{4}$  oz., essence of ambergris, 5 oz., spirit of ambrette, 1 quart. Digest in a moderately warm situation for 2 months. Quality, superior.

2. Musk, 14 drachms; triturate with an equal quantity of sugar, add 10 oz. boiling water, digest until cold, then

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add rectified spirit, 6½ pints, carbonate of potash, ½ drachm; digest and filter.

*Essence of Mustard.*—Oil of turpentine, 1 pint, camphor, oil of rosemary, and flour mustard, of each ½ oz.; mix. Rubefacient; used to bathe rheumatic limbs, &c.

*Essence of Neroli.*—Oil of orange, 2 drachms, bruised orris root, ½ oz., ambergris, 10 grains, neroli, 15 drops, spirit of wine, 1 pint. Digest 14 days, and filter. Odorous.

*Essence of Patchouli.*—1. Dried patchouli, 1 oz., rectified spirit, 1 pint, digest and filter. Used as a perfume.

2. Oil of patchouli, 10 drachms, otto of roses, 2 drachms, spirit, 1 gallon.

*Essence for Preston Salts.*—Oil of cloves, 1 drachm, English oil of lavender, 2 drachms, essence of bergamotte, 5 drachms, strong liquor of ammonia, 1 pint; mix.—*Mounsey.*

*Essence of Quinine.*—1. Diluted sulphuric acid, 1 part, alcohol, 8 parts, and sulphate of quinine as much as it will dissolve.

2. Sulphate of quinine, ½ oz., aromatic sulphuric acid, 1 oz., mix, and add tincture of orange, 12 oz., syrup of red poppy, and water, of each 1 oz.

*Essence of Rondeletia.*—1. Essences of bergamotte and lemon, and oil of cloves, of each 1 drachm, otto of roses, 6 drops, rectified spirit, 1 pint.

2. Oil of lavender, 2 oz., of cloves, 1 oz., of bergamotte, 1 oz., otto of roses, 3 drachms, essence of musk, vanilla, and ambergris, of each 5 oz., grape spirit, 1 gallon.

*Essence of Red Roses.*—Red rose leaves, 1 lb., rectified spirit, and water, of each 2 quarts, dilute sulphuric acid, 2 drachms; digest 14 days, express, and filter. Used to make the honey and syrup of roses.

*Essence of Spring Flowers.*—Extract of roses and violets, of each 1 pint, of cassie, 2½ oz., oil of bergamot, 2 drachms, of ambergris, 1 oz.

*Essence of Siccet Brier.*—Spirituous extract of rose pomatum, 10 oz., ditto of cassie and orange flowers, of each

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2½ oz., esprit de rose, 2½ oz., oils of neroli and verbena, of each 15 drops; mix.

*Essence of Sweet Pea.*—Extract of tuberuse, of orange flower, and of roses, of each 10 oz., extract of vanilla, 1 oz.

*Essence of Tonquin.*—Tonquin beans, 1 lb., spirit, 1 gallon; digest four weeks and strain.

*Essence of Vanilla.*—1. Vanilla, 4 oz., rectified spirit, 1 pint. Digest for two months, and filter.

2. Vanilla, 9 oz., essence of ambrette, 1 quart, cloves, ½ drachm, grain musk, 7 grains. Digest and filter. Used as a perfume, and for flavouring.

3. Vanilla pods (chopped), ½ lb., spirit, 1 gallon; macerate for one month, and strain.

*Essence of Verbena.*—Oil of lemon grass, 3 drachms, of lemon peel, 2 oz., of orange peel, 4 drachms, spirit, one pint; mix and filter.

*Essence of Violets.*—Alcoholic extract of cassie, 1 pint, esprit de rose, tincture of orris and of tuberuse, of each ½ pint, oil of almonds, 3 drops.

**ESSENTIA ODORIFERA.**—Grain musk and balsam of Peru, of each 11 grains, civet and oil of cloves, of each 5 grains, oil of rhodium, 2 grains, salt of tartar, 30 grains, alcohol, 2 oz.; digest and filter.

**ETCHING.**—A method of engraving on plates with acids, which are poured into lines drawn on the plate, covered with a wax ground. The plate is warmed, the ground is applied, and distributed evenly by heat, and when cool, a bodkin, &c., is used to engrave, by removing the wax, so as to expose the plates in lines suited to the sketch. The acid is then applied to bite away the exposed portion of the plate; it is prevented from acting elsewhere by the untouched wax, and when it has acted sufficiently the wax is removed and the sketch printed from.

*Etching Ground.*—Melt in a glazed earthen vessel 2 oz. of powdered asphaltum, then add 1 oz. of Burgundy pitch; melt, and add 1½ oz. of virgin wax; mix well,

pour into warm water and incorporate the whole with the hands.—*Lowry*.

*Transparent Etching Ground*.—Resin, 1 oz., virgin wax, 2 oz.; melt in an earthen pipkin. Or turpentine varnish mixed with a small quantity of oxide of bismuth.—*Fielding*.

*Bordering Wax*.—Burgundy pitch, 3 lbs., bees'-wax, 1 lb.; melt, and add  $\frac{1}{2}$  pint of sweet oil. Pour it into water and work it with the hands.—*Fielding*.

*Etching Fluid for Copper*.—1. Nitrous acid, 1 part, water, 5 parts; mix gradually, and add the size of a hazel nut of sal ammoniac to each pint.—*Fielding*.

2. Verdigris, alum, sea salt, and sal ammoniac, of each 1 part, vinegar, 2 parts; dissolve, add water, 4 parts, boil a minute, and cool.—*Callot*.
3. Iodine, 2 parts, iodide of potassium, 5 parts, water, 8 parts.

*Etching Fluid for Steel*.—1. Pyroligneous acid and nitric acid, each 1 part, water, 6 parts.—*Fielding*.

2. Iodine, 1 oz., iron filings,  $\frac{1}{2}$  drachm, water, 4 oz.; digest until dissolved.
3. Hydrochloric acid, 10 parts, distilled water, 70 parts, chlorate of potash, 2 parts. Dissolve the chlorate in the water, and add the acid. Diluted with water for use to the strength required.

**ETHER**.—No formula is given for its preparation in the P. L. It was formerly called sulphuric ether.

*Characters and tests*.—Colourless, sp. gr. not exceeding 0.750. Exposed to the air it flies off in vapour; it affects litmus with a red colour, either very slightly or not at all. Half an ounce mixes completely in half a pint of water.—*L.*

Dose:  $\frac{1}{2}$  drachm to 2 drachms in any convenient vehicle. Stimulant and antispasmodic. It is soluble in alcohol, but if the two are mixed with water the ether separates. Ether dissolves resins and caoutchouc, and will dissolve and remove bichloride of mercury from its solution in water or in organic fluids. “It mixes better with water if each drachm be triturated with 2 grains of spermaceti.”—*United States Dispensary*.

**ETHIOPS, MARTIAL.**—Iron filings oxidized under water. Formerly much esteemed as a tonic.

**ETHIOPS MINERAL.**—A mercurial compound used in cattle medieine.

**EXTRACTS.**—Thickened juices of various vegetable medieines.

*Directions of the London College.*—“In preparing extracts, unless otherwise ordered, evaporate the liquid by a water bath in a pan as quickly as possible, stirring constantly towards the end with a spatula, until a consistence is acquired suitable for forming pills.”

*Extract of Aconite, L.*—Fresh leaves of aconite, 1 lb., bruise them in a stone mortar, press out the juice, and evaporate it unstrained to a proper consistence. Used in rheumatism, neuralgia, fever, &c. Dose:  $\frac{1}{4}$  to 2 gr., beginning with the smaller doses. A powerful poison.

*Extract of Aloes, L.*—Socotrine aloes, 15 oz., boiling distilled water, 1 gallon. Macerate with a gentle heat for 3 days, strain and set aside, afterwards pour off the clear, and evaporate to a proper consistence. Dose: 5 to 15 grains.

*Extract of Barbadoes Aloes, L.*—Prepared as extract of aloes. Dose: 5 to 15 grains. Both are prepared to separate impurities, and render the medieine more mild in its operation.

*Extract of Belladonna, L.*—Prepared as extract of aconite. Aerid, narcotic, resolvent. Used in neuralgia, tie-douloureux, and in diseases of the eye. Dose: one-tenth to 2 grains, used cautiously.

*Extract of Dandelion (Fluid.)*—Fresh dandelion roots, 20 lbs. (av.,) alcohol, sp. gr. .835, four pints; beat or slice the roots to a pulp, add the alcohol, mix, let stand a month or more, express strongly, and filter.

*Extract of Elder Flowers.*—Tincture of benzoin, 1 oz., elder flower water, 1 quart; gradually add the water to the spirit.

*Extract of Elder Flowers, for the Complexion.*—Take gum benzoin, 1 drachm, spirits of wine, a wineglassful, elder flower water, 1 pint. Powder the gum, and put it into the spirit (unsweetened gin will do.) In a short time it will be dissolved. Now put this mixture into a jug, and then gradually add the elder flower water.

## EXTRACTS.

If there be any particles of benzoin not dissolved, the extract must be strained through fine muslin prior to its being put into the toilet-bottle. On account of the milky appearance of this preparation, the French perfumers call it *lait virginal*.

*Extract of Yellow Bark, L.*—Yellow cinchona coarsely bruised, 3 lbs., distilled water, 6 pints. Add 4 pints of water to the bark, stir until the bark is soaked, macerate for 24 hours, and strain through linen. Macerate the bark in the remaining water for 24 hours; mix the liquors, and evaporate to the required consistence.

*Extract of Pale Bark, L.*—Prepared as extract of yellow bark.

*Extract of Red Bark, L.*—Prepared as extract of yellow bark. All the varieties are tonic and stomachic. Dose: 10 to 30 grains. Little used since the discovery of quinine.

*Extract of Colchicum, L.*—Fresh colchicum cormi, 1 lb. Remove the outer coats, and proceed as for extract of aconite. Used in the early stages of acute rheumatism. Dose: 1 to 2 grains every 4 hours, until it acts as a purgative.

*Extract of Colchicum, (acetic) L.*—Meadow saffron cormus, fresh, 1 lb., acetic acid, 3 oz. Strip the cormus, bruise it, and sprinkle the acetic acid on it, express the juice, and evaporate it unstrained to an extract. Employed in acute rheumatism and gout. Dose: 1 to 2 grains, two or three times a day.

*Extract of Colocynth, L.*—Cut colocynth without seeds, 3 lbs., distilled water, 4 pints. Macerate the colocynth for 36 hours, frequently pressing it with the hand. Express strongly, and strain the liquor, which evaporate to an extract. Purgative. Dose: 5 to 20 grains.

*Extract of Dandelion, L.*—Prepared as extract of liquorice. Tonic, aperient, alterative. Used in liver-complaints, &c. Dose: 10 to 60 grains.

*Extract of Elaterium, L.*—Take of wild cucumbers, 1 lb., slice them longitudinally, and strain the juice very gently, express through a very fine hair sieve, and set

## EXTRACTS.

it by to subside. The thinner fluid being rejected, dry the thicker portion with a gentle heat. Strong hydragogue, cathartic. Used in dropsy, and in combination, for obstinate constipation. Dose: of good extract  $\frac{1}{8}$  to  $\frac{1}{4}$  gr., of inferior up to 1 gr. Varies greatly in quality.

*Extract of Gentian, L.*—Gentian sliced, 3 lb., distilled water, 6 pints. Macerate the gentian in 4 pints of water for 12 hours, and strain. Add the remaining water to the gentian, macerate for 6 hours, express and strain. Evaporate the mixed liquids to an extract. Tonic, stomachic. Dose: 5 to 20 grains.

*Extract of Heliotrope.*—Alcoholic extract of vanilla, 10 oz., of rose pomatum, 5 oz., orange-flower pomatum, 2 oz., of ambergris, 1 oz., essential oil of almonds, 5 drops.

*Extract of Honeysuckle.*—Alcoholic extracts of rose pomatum, of violet, and of tuberuse, of each 10 oz., extracts of vanilla and tolu, of each 5 oz., otto of neroli, 5 drops, otto of almonds, 2 drops.

*Extract of Hyoscyamus (Fluid.)*—Henbane leaves, coarsely powdered, 8 oz. troy, sugar, 8 oz. troy, diluted alcohol, q. s.; add to the leaves 1 pint of alcohol, macerate twenty-four hours, and by percolation obtain 3 pints of tincture, evaporate to 10 fluid ounces; while hot, add the sugar, make up 1 pint with alcohol, and strain. Dose: 15 to 30 drops.

*Extract of Hemlock, L.*—Prepared as extract of aconite. Narcotic, resolvent. Dose: 2 to 6 grains.

*Extract of Henbane, L.*—Prepared as extract of aconite. Narcotic, anodyne. Dose: 2 to 10 grains.

*Extract of Hop, L.*—Hops, 2½ lbs., boiling distilled water, 2 gallons. Proceed as for extract of liquorice. Bitter tonic. Dose: 5 to 20 grains.

*Extract of Jonquil.*—Alcoholic extract of jasmine and of tuberuse, of each 10 oz., of orange flower, 5 oz., extract of vanilla, 1 oz.

*Extract of Jalap, L.*—Powdered jalap, 2½ lbs., rectified spirit, 1 gallon, distilled water, 2 gallons. Macerate the jalap in the spirit for 4 days, and pour off the tincture. Boil the jalap in the water to 4 pints, strain the tincture and decoction separately. Distil the tincture

## EXTRACTS.

and evaporate the decoction until each thickens, then mix and evaporate to an extract. This extract should be kept *soft* to form pills, and *hard* to rub to powder.

Purgative. Dose: 10 to 20 grains.

*Extract of Lettuce, L.*—Prepared as extract of aeonite. Sedative. Dose 3 to 10 grains.

*Extract of Lavender.*—Otto of lavender (English,) 1 oz., rose water, 5 oz., rectified spirit, 25 oz.; mix and distil 25 oz.—*Smyth.*

*Extract of Liquorice, L.*—Fresh sliced liquorice, 2½ lbs., boiling distilled water, 2 gallons. Macerate for 24 hours, boil to a gallon, strain while hot, and evaporate to an extract.

*Extract of Logwood, L.*—Sliced logwood, 2½ lbs., boiling distilled water, 2 gallons. Proceed as for extract of liquorice. Astringent. Dose; 10 to 30 grains.

*Extract of Malt.*—Evaporate a strong decoction or infusion of malt to the consistency of treacle. Used as a cough medicine.

*Extract of Meat.*—Mineed *lean* meat, 1 part, water, 8 parts, heat gradually to the boiling point, strain, and evaporate in a water bath. 2 lbs. yield 1 oz. of extract. It will not keep if made with the fatty portion.

*Extract of Opium, L.*—Opium sliced, 1½ lbs., distilled water, 5 pints. Macerate the opium in half the water for 24 hours, frequently stirring, then strain, macerate for 24 hours in the remaining water, strain and evaporate the mixed liquors to an extract. Used as a mild preparation of opium. Dose: 1 to 6 grains.

*Extract of Pareira, L.*—Prepared as extract of logwood. Used in bladder complaints. Dose: 10 to 30 grains.

*Extract of Poppy, L.*—Poppies bruised and freed from the seeds, 15 oz., boiling distilled water, 1 gallon; macerate for 24 hours, boil to four pints, strain while hot, and evaporate to an extract. Anodyne narcotic. Dose: 2 to 20 grains.

*Extract of Rhubarb, L.*—Rhubarb powdered, 15 oz., proof spirit, 1 pint, distilled water, 7 pints; macerate for 4 days, strain, and when the dregs have subsided

## EXTRACTS.

evaporate the clear liquor to an extract. Purgative, and used as a vehicle for purgatives. Dose: 10 to 30 grains.

*Extract of Sarsaparilla, (Fluid) L.*—Sliced sarsaparilla, 3½ lbs., boiling distilled water, 5 gallons, rectified spirit, 2 oz. Boil the sarsaparilla in 3 gallons of water to 12 pints, and strain. Boil it again in the remaining water, and strain. Evaporate the mixed liquors to 18 oz., and when cold add the spirit. Dose: 1 to 2 drachms or more.

*Extract of Senna, (Fluid.)*—1. Senna, 15 lbs. av., boiling water, q. s., concentrate the infusion to 10 lbs. av., dissolve in it 6 lbs. of thick treacle, add 24 fl. oz. of rectified spirit, and water q. s. to make 15 pints *o. m.* Dose, two drachms. Each oz. represents one oz. of senna.—*Duncan.*

2. Mix 2½ lb. of senna in coarse powder with 64 oz. of proof spirit; in 24 hours percolate, adding water, mixed with  $\frac{1}{2}$  its measure of spirit, until 9½ pints have passed: evaporate in a water-bath to 20 oz., filter, add 20 oz. of sugar, and when dissolved add further 2 drachms of compound spirit of ether, mixed with 1 drachm of oil of fennel.—*U. States Dis.* 1 oz. is equal to 1 oz. of senna.

*Extract of Stramonium, L.*—Thornapple seeds, 15 oz., boiling distilled water, 1 gallon; macerate for 4 hours with a gentle heat, then bruise the seeds and return them to the liquor, boil down to 4 pints, strain while hot, and evaporate to an extract. Anodyne, irritant. Dose:  $\frac{1}{4}$  of a grain, cautiously increased to 2 grains.

*Extract of Whortleberry, L.*—Prepared as extract of hops. Use in diseases of the bladder. Dose: 6 to 30 grains.

**FEET, THE**—of some persons, naturally evolve a disagreeable odour. Wash them in warm water, to which a little hydrochloric acid or chloride of lime has been added.

**FERMENTED MEDICAL PREPARATIONS.**—An aqueous solution is first prepared; then to every 8 parts of this 3 parts of sugar are added, and yeast, q. s. After re-

maining one or two months at 65° to 75° F., the mixture is strained for use.

**FERRIDCYANIDE OF IRON.**—Preeipitate a solution of protosulphate of iron by another of red prussiate of potash. It forms a Prussian blue of a beautiful tinge, sometimes called Turnbull's Blue.

**FILTERING POWDER.**—Fuller's earth purified and powdered mixed with animal chareoal. Used to filter oils, &c., and to render various liquids whiter.

**FILTRATION** is the proeess adopted for separating the liquid from the solid portions of a mixture. The media consists of unsized paper, flannel, cloth, sand, and various powders. Sometimes a little tow or cotton wool serves the purpose. Tinetures, spirits, perfumes, and other preparations of the retail trade are generally filtered through paper, folded properly for the purpose, and loosely fitted in a funnel.

**FININGS.**—1. Isinglass, 1 lb., beer, eider, or vinegar,  $\frac{1}{2}$  gallon. Mix until it beeomes a jelly, then add sufficient of the liquid it is to fine, to reducee it to a proper consistenee. Used to refine porter, wine, &c.

2. *For Gin.* Subcarbonate of potash, 4 oz., roche alum, 8 oz. Mix in powder.

**FIRES TO EXTINGUISH.**—Various solutions of salts have been proposed as more effeetual than water. *Dr. Clanny's* eonsists of 5 oz. of sal-ammoniae to each gallon of water, and in small fires it is effeetual, but in large fires its action is insignifeant beyond the effect of eommon water. It is said that dried prussiate of potash, ehlorate of potash, and sugar, form the compound used in Phillips' Fire-Annihilator.

**FIXING SOLUTION FOR PAPER PICTURES.**—Hyposulphite of soda, 1 oz., pure water, 1 quart. The picture must be well soaked or washed in water and dried, then washed on both sides with the fixing solution, and finally rinsed with elean water.

**FLAME, COLOURED.**—Aleohol mixed with nitrate of copper

or boraeie acid burns *green*; and with the nitrates of strontian, iron, or lime, a *red*; and with nitrate of soda, a *yellow*.

**FLASH.**—Essence of capsieums and burnt sugar mixed. Used to make weak spirit taste strong.

**FLAVOURING ESSENCE.**—Oil of bitter almonds, 8 drops, essence of lemon, 12 drops, oil of eassia, 6 drops, oil of nutmeg, 4 drops, oil of cloves, 1 drop, reetified spirit, 1 oz. Used for pastry and eustards.

**FLIES, TO DESTROY.**—Boil some quassia chips in a little water, sweeten the clear liquor with some treacle, and place it in saueers. It is destruetive to flies, but not to children. Or spread paper with turpentine-varnish, and oil it to keep the varnish from drying: it entangles the flies whieh rest on it.

**FLOUR, BAKED.**—Astringent. Used for infants troubled with diarrhoea. Vended under the title of Hard's farinaeuous food.

**FLOUR WHEAT.**—Adulterated flour may be tested as follows:—

1. By its sp. gr. Potato-flour, gypsum, or ground bones increase its density, so that a measure holding 1 lb. of pure flour, will hold  $1\frac{1}{2}$  lb. of the adulterated.
2. Nitrie acid colours wheat-flour a fine orange yellow; it does not affect feeula or starch.
3. Pure hydrochlorie acid colours wheat-flour of a deep violet, but dissolves without colouring feeula or starch, forming a thick substanee, deeomposable by alkalies.
4. Pure flour absorbs more water than feeula.
5. Boiling water will develop the seent of bean or pea flour.

**FLOWERS.**—To hasten the blowing of flowers, use the following mixture. Nitrate or sulphate of animonia, 4 oz., nitrate of potash, 2 oz., sugar, 1 oz., hot water, 1 pint; dissolve and keep well closed. Add 20 drops to the water used to moisten or surround the flowers, changing it each week. Cut flowers may be preserved longer by

using a little nitrate of soda to the water in which they are put, or by placing over them a bell jar. A Ward's case will keep them a long time, as fresh, apparently, as at first.

**FLUX.**—A substance added to render others more fusible.

1. *Black Flux.*—Cream of tartar, 2 parts, nitre, 1 part; mix, and throw by portions into a red hot crucible. Used to smelt metallic ores. So also is *Morveau's*, glass, 16 parts, calcined borax, 2 parts, charcoal, 1 part; mix.
2. *White Flux.*—As before, but equal parts of nitre and tartar.
3. *Crude Flux.*—The first mixture before deflagration.
4. *Cornish Flux.*—Cream of tartar, 10 parts, nitre 4 parts, borax, 3 parts; mix.

*Christison's Flux for reducing Arsenic.*—Crystallized carbonate of soda, 8 parts, charcoal, 1 part; mix, and heat gradually to redness.

*Fresenius's Flux.*—Dry carbonate of potass, 3 parts, cyanide of potassium, 1 part. Used to reduce the sulphuret of arsenic.

**FOIE DE SOUFRE.**—Sulphuret of potash.

**FOIE DE SOUFRE CALCAIRE.**—Sulphuret of lime.

**FOILS** are thin leaves of metal, used to heighten the effect of jewellers' stones and pastes. The *white* foils are made of thin sheet copper, plated with silver, and drawn through two rollers so as to make it very thin, the silver is then burnished. This is covered with colour when required, and in all cases the foil is enclosed in the setting, entirely covering the back of the stone, to which it imparts much of its own brilliancy. When it is desired to modify the colour of the stone, a foil of lighter or darker tint is used as required. The reflection of the colour is so diffused throughout the stone, as to render it difficult in many cases to ascertain whether the tint is real or artificial. The white foil is coloured as follows:

*Blue.*—Turnbull's blue ground with pale quick-drying oil to the shade required. Used to deepen the shade of sapphires.

*Green*.—Shellac dissolved in alcohol, and sufficient verdigris added to colour.

*Yellow*.—Mastic in alcohol with turmeric, or a solution of hay saffron and isinglass.

*Red*.—The solution of carmine in ammonia, or lake or carmine ground in isinglass.

Any of the above may be varied in shade by mixing, and when dry may be varnished to heighten the brilliancy.

**FRECKLES** may be removed by frequently applying dilute spirit, or acid, or alkaline solutions.

*Lotion for Freckles*.—1. Hydrochlorate of ammonia, 1 drachm, lavender water, 2 drachms, spring water, 1 pint. Apply with a sponge 2 or 3 times a day.—*Kittoe*.

2. Hydrochloric acid, 1 drachm, rectified spirit, 1 oz., water, 8 oz.; mix, and apply as before.

**FREEMAN'S BATHING SPIRITS**.—A mixture of opodeldoc and Daffy's elixir.

**FREEZING MIXTURES**.—An artificial means of producing cold by dissolving certain salts in water. The assistance of ice or snow produces greater cold, and saves trouble and expense, but as artificial cold is chiefly required when these are not to be had, means are then resorted to which render them unnecessary.

*With Ice or Snow*.—1. Snow, 3 parts, potash, 4 parts. Sinks the thermometer 83 degrees.

2. Snow, 2 parts, crystallized muriate of lime, 3 parts. Thermometer sinks 82 degrees.

3. Snow, 3 parts, diluted sulphuric acid (2 parts acid to 1 water, by weight) 2 parts. The thermometer sinks 55 degrees.

*Without Snow*.—1. Sulphate of soda, 6 parts, nitrate of ammonia, 5 parts, diluted nitrous acid, (2 acid to 1 water by weight,) 4 parts. Thermometer sinks 64 degrees.

2. Phosphate of soda, 9 parts, nitrate of ammonia, 6 parts, diluted nitrous acid, as above, 4 parts. Sinks the thermometer 71 degrees.

3. Phosphate of soda, 9 parts, diluted nitrous acid, as before, 4 parts. Thermometer sinks 62 degrees.
4. Nitrate of ammonia and water, equal parts. Thermometer sinks 46 degrees.
5. Nitrate of ammonia, carbonate of soda, and water, equal parts. Thermometer sinks 57 degrees.

By cooling the vessels and mixtures previous to commencing, an extreme degree of cold may be produced. Mr. Walker, in this manner, produced a cold equal to 132 degrees below the freezing point of water. The coldest mixtures are produced by other liquids than water, but, for retailing, the powdered and mixed salts are prepared so as to require water only. Besides the above, there are other proportions suited for the purpose; when made up they are sold as freezing powders.

1. Powdered muriate of ammonia, 8 oz., nitre, 13 oz.; mix.
2. Nitrate of ammonia and muriate of ammonia, equal parts; mix.
3. Nitrate of ammonia and crystallized carbonate of soda, equal parts; mix. This is one of the best.

**FRENCH POLISH.**—A varnish for furniture. The simplest, and perhaps the best, is the solution of shellae only, but many add gums sandarae, mastie, eopal, Arabie, benjamin, &c., from the idea that they contribute to the effect. Gum Arabie is certainly never required if the solvent be pure, because it is insoluble in either rectified spirit or rectified wood naphtha, the menstrua employed in dissolving the gums. As spirit is seldom used on account of its expense, most of the following are mentioned as solutions in naphtha, but spirit can be substituted when thought proper.

1. Shellae, 1½ lb., naphtha, 1 gallon; dissolve, and it is ready without filtering.
2. Shellae, 12 oz., eopal, 3 oz., (or an equivalent of varnish;) dissolve in one gallon of naphtha.
3. Shellae, 1½ lb., seed lae and sandarae, each 4 oz., mastie, 2 oz., rectified spirit, 1 gallon; dissolve.
4. Shellae, 2 lbs., benzoin, 4 oz., spirit, 1 gallon.
5. Shellae, 10 oz., seed-lae, sandarae, and eopal varnish, of each 6 oz., benzoin, 3 oz., naphtha, 1 gallon.

To darken polish, benzoin and dragon's blood are used, turmeric and other colouring matters are also added; and to make it lighter it is necessary to use bleached lae, as though some endeavour to give this effect by adding oxalic acid to the ingredients, it, like gum Arabic, is insoluble in good spirit or naphtha. For all ordinary purposes the first form is best and least troublesome, while its appearance is equal to any other.

*French Polish, To.*—The wood must be planed level, and sand-papered until it is *quite smooth*, otherwise it will *not polish*. Then provide a rubber of cloth, list, or sponge, wrap it in a soft rag, so as to leave a handle at the back for your hand, shake the bottle against the rubber, and in the middle of the varnish on the rag plane with your finger a little raw linseed oil. Now commence rubbing, in small circular strokes, and continue until the pores are filled, charging the rubber with varnish and oil as required, until the whole wood has had one coat. When dry repeat the process once or twice until the surface appears even and fine, between each coat using fine sand-paper to smooth down all irregularities. Lastly, use a clean rubber with a little strong alcohol only, which will remove the oil and the cloudiness it causes; when the work will be complete.

#### FRUSTULA.—A little bit.

**FULMINATING POWDER.**—Dry and powder separately 3 parts of nitre, 2 of carbonate of potash, and 1 of flour sulphur, then mix gently in a warm mortar. The compound heated over the fire explodes with great violence, and should therefore be cautiously used.

**FUMIGATION.**—The purifying air or solid bodies by disinfectants. Chlorine is the most powerful for ordinary use, and is mostly applied by sprinkling in the room, &c., a solution of 1 oz. of chloride of lime in 1 quart of water. When an apartment is not inhabited chlorine gas may be used instead of the lime, but it is more difficult to manage. Mix 1 oz. of common salt with  $\frac{1}{2}$  oz., of oxide of manganese in a China cup, pour on

this 6 drachms of oil of vitriol, the cup being placed in hot sand in the middle of the apartment, chlorine gas is immediately given off, and if the chimney, windows, &c., have been properly stopped up, it will fill the room thoroughly, destroying vermin and contagion. It spoils polished metals, such as steel fenders, fire-irons, &c., and also many colours in furniture, bed, or paper hangings, which should therefore be removed. When a few hours have elapsed, the windows and chimney must be opened to let the gas pass off. The fumigations of nitric or hydrochloric acid gas are not now used, being superseded by better modes of purification. Nor is any dependence to be placed on the efficacy of sulphur, acetic acid, or tar fumigations, or the burning of pastilles, gums, camphor, tobacco, &c., all being much inferior to chlorine gas, or to the chlorides of soda and lime.

**FURNITURE POLISHES.**—New wood is often French-polished.

Or the following may be tried :

Melt 3 or 4 pieces of sandarac, each the size of a walnut, add 1 pint of boiled oil, and boil together for 1 hour. While cooling add 1 drachm of Venice turpentine, and if too thick a little oil of turpentine also. Apply this all over the furniture, and after some hours rub it off; rub the furniture daily, without applying fresh varnish, except about once in 2 months. Water does not injure this polish, and any stain or scratch may be again covered, which cannot be done with French polish.—*J. Rhode.* To give a gloss to household furniture, various compositions are used, known as wax, polish, creams, pastes, oils, &c. The following are some of the forms used.

*Furniture Cream.*—Bees'-wax, 1 lb., soap, 4 oz., pearl-ash, 2 oz., soft water, 1 gallon; boil together until mixed.

*Furniture Oil.*—1. Acetic acid, 2 drachms, oil of lavender,  $\frac{1}{2}$  drachm, rectified spirit, 1 drachm, linseed oil, 4 oz.

2. Linseed oil, 1 pint, alkanet root, 2 oz.; heat, strain, and add lac varnish, 1 oz.

3. Linseed oil, 1 pint, rectified spirit, 2 oz., butter of antimony, 4 oz.

*Furniture Paste.*—1. Bees'-wax, spirit of turpentine, and linseed oil, equal parts; melt and cool.

2. Bees'-wax, 4 oz., turpentine, 10 oz., alkanet root to colour; melt and strain.
3. Bees'-wax, 1 lb., linseed oil, 5 oz., alkanet root,  $\frac{1}{2}$  oz.; melt, add 5 oz. of turpentine, strain and cool.
4. Bees'-wax, 4 oz., resin, 1 oz., oil of turpentine, 2 oz., Venitian red to colour.

**FUSIBLE METAL.**—1. *Newton's.* 8 parts bismuth, 5 lead, 3 tin; mix. Melts at  $212^{\circ}$ .

2. *Rose's.*—2 bismuth, 1 lead, 1 tin; melts at  $201^{\circ}$ .

3. *Onion's.*—5 bismuth, 3 lead, 2 tin; melts at  $199^{\circ}$ .

4. *Walker's.*—8 bismuth, 5 lead, 4 tin, 1 antimony. For electrotype casts.

All the above are rendered more fusible by adding a little mercury to them.

**GALL, CLARIFIED.**—Evaporate clear ox-gall to the consistency of syrup, then expose it thinly spread on dishes to dry. It is dissolved in water for use. Or, boil and skim 1 pint of ox-gall, add 1 oz. of alum, and bottle; treat another pint similarly, using 1 oz. of salt instead of alum. In 3 months mix the galls, and filter the clear. Used to mix with water-colours, to remove the grease from drawing-papers and ivory. Also employed to clean carpets and clothes.

*Gall, Inspissated.*—Strain fresh ox-gall through flannel, and evaporate in a water-bath to the proper consistence. It may be evaporated to dryness, powdered, and preserved.

**GANTEINE.**—Soap, 3 oz., water, 2 oz.; beat together, and add eau de javelle, 2 oz., liquor ammonia, 1 drachm. The paste is used to rub over soiled kid gloves, properly stretched, for the purpose of cleaning them.

**GAS** is the vapour of various chemical substances. The ordinary coal gas of the street lamps is prepared by distilling coal gas in iron retorts, and may be illustrated

on the small scale as follows:—Nearly fill the bowl of a tobaceo-pipe with small coal, and stop the top *close* with clay, or sand and beer; insert the bowl in the fire, and when the smoke issues from the stem it may be lighted. The modes of producing chemeial gases are stated under the proper heads in this work.

**GERMAN PASTE.**—Blanched sweet almonds, 1 lb., pea-meal, 2 lbs., butter, 3 oz., saffron, 4 grains, the yolk of 2 eggs, honey sufficient to make a paste, which must be passed through a sieve. Used to feed larks, nightingales, and other insectivorous singing birds.

**GILDING.**—The proeess of attaehing gold to any substance. *Books* are gilt and lettered by a hot iron or brass tool being pressed on the leather, the tool having on its faee a little gold-leaf. The heat alone causes it to adhere, though some spread finely powdered mastic over the leather before applying the tool. The *edges* of books are cut, and varnished with size, the gold leaf is then attaehed and burnished.

*Gilding, Burnished.*—Coat the wood first with size, and afterwards with size and whiting mixed until a sufficient thickness is obtained. Between each coat, glass paper must be used to smooth the surface. The gold size is now applied thinly, and when *nearly dry* the leaf is attaehed, and afterwards burnished.

*Gilding, Cold.*—Pure gold, 5 drachms, pure copper, 1 drachm, nitro-muriatice acid, 10 oz.; dissolve.—Dip li-  
nen rags in this solution, dry and burn them; the ashes contain gold in the finest powder. Clean the copper or brass intended to be gilt, rub the powder on with a eork dipped in salt and water until well gilt, and afterwards burnish.

*Gilding Liquor.*—Common salt and alum, of each 1 oz., pure nitre, 2 oz., water, 5 oz. Trinkets of gold are dipped in this pickle, which imparts a rich colour.

*Gilding Metals.*—Perfectly bright or polished iron or steel may be written on or painted with an ethereal solution of gold, the ether flies off and leaves the gold, which will require burnishing. Or, heat the polished metal to

blueness, apply the gold leaf carefully, repeat the heating and gilding until thick enough, then cool and burnish.

*Gilding China and Glass.*—Powdered gold is mixed with borax and gum-water, and the solution applied with a camel-hair pencil. Heat is then applied by a stove until the borax fuses, when the gold is fixed, and afterwards burnished.

*Gilding silk, satin, woollen, ivory, bone, &c.*—Dissolve terechloride of gold, 1 part, in water, 4 parts, paint the article with this solution, and expose it to the vapour of hydrogen gas, when it will become brilliant with a coating of gold, which will not readily tarnish.

*Gilding, Water.*—An amalgam of gold and mercury is applied, and the mercury being volatilized by heat, leaves the gold.

**GILDERS' WAX.**—1. Bees'-wax, 4 parts, verdigris and sulphate of copper, each 1 part; mix.

2. Instead of the sulphate, substitute 1 part each of red ochre and alum. Used to give a red colour to water-gilding.

There are also the voltaic and electrotyping modes of gilding, and these are used in many fine works; the processes may be seen in any treatise on Electrotyping or Electro-Metallurgy, such as Smee's, Napier's, or Walker's.

**GINGER BEER.**—See BEER. *Powders* for imitating ginger-beer are prepared as follows:

1. Bicarbonate of soda, 30 grains, white sugar, 1 drachm, powdered ginger 5 grains, mix, for each blue paper; and put 25 grains of tartaric acid in each white paper.—*Pereira.*—For use, the contents of one blue paper is stirred in a tumbler of cold water, and when dissolved, the contents of a white paper added, and the mixture taken while effervescent.

2. Sugar, 2 drachms, sesquicarbonate of soda, 2 scruples, ginger, 4 grains, essence of lemon, 2 drops, mix, for each blue paper; and in each white paper put 35 grains of tartaric acid.—*Pharm. Journal.*

3. Sugar, 10 oz., carbonate of soda, 624 grains, ginger, 192 grains, mix; for 12 blue papers. For 12 white papers: divide 360 grains of tartaric acid.—*Bateman.*
4. Use lemonade powders, and add to the water some essence of ginger while mixing.

**GINGERBREAD.**—A confection often used in which to administer purgatives to children. If required to be purgative, sufficient jalap must be added to allow each eake 7 grains.

**Ormskirk.**—Flour, 4 lbs., sugar, 2 lbs., treacle, 2 lbs., butter, 22 oz., candied lemon, 8 oz., ginger, 1 oz., and 1 nutmeg. Mix the flour and powdered spieces with the butter, add the treacle and sugar, and divide into cakes.

**GLASS** is a well known transparent substance, used chiefly to admit light and exclude cold air. The most common varieties are *crown*, or window glass, worked in circular tables, with a bull-eye in the centre, and the table not quite flat, and *sheet* glass, or flattened large sheets, which are now made of such excellent quality as to almost supersede the more expensive *plate* glass. *Flint* glass is that used in the manufacture of bottles, &c.

*To clean.*—Rub it with powdered rotten-stone or fuller's earth and a moistened flannel, then wipe it dry. Or as this leaves the powder in the corners, simply wash the glass with clean water, dry with a duster, and polish with chamois leather. No better method can be used.

*To cut.*—No means serve so well as using the glazier's diamond, but in default of this try the following:—Use a triangular file, and keep the edge wet with water or turpentine. When the article is a tube or bottle, the mark must be carried round, and the tube will separate on applying a little force. Holes may be drilled in glass by moistening the point of the drill with turpentine, and using but little pressure. Tubes and bottles will separate by applying a heated metal ring to the part, or by tying round them a string of

worsted dipped in turpentine, and setting it on fire, afterwards in either case dipping the heated glass into cold water. A broken bottle may be cut straight by marking with ink where it should be divided, then with a hot pointed iron begin at some distance off; when the glass cracks, carry the iron along to the mark, and turn the glass round under the point; plunge immediately into water and it will separate. Of these methods the use of the file is most certain, the others sometimes fail.

*To powder.*—Heat glass red hot, throw it into cold water, dry, and powder it. It becomes more brittle by the sudden cooling. Used to make glass-paper and corn-rubbers, and as a filtering powder for acids.

GLASS, GROUND, is one of the varieties of window glass. It may be imitated by dabbing plain glass on one side with putty, or better still, with white lead and sugar of lead ground together.

GLASS, WRITING ON.—Use a mixture of size and lamp-black as a temporary means, or for permanency the shellac, or other incorrodible ink (see INK.) To engrave or etch on glass, it is covered with etching-ground, through which the design is cut down to the glass. Liquid hydrofluoric acid is then poured on for a *transparent* design, or the glass is exposed to the vapour of the gas if desired to be *opaque*. This acid rapidly corrodes the glass, and removes the parts which it attacks; when these are sufficiently bitten in, the acid is poured off and the glass washed. This method is applied to *flashed* glass, or that only coloured on one side, as ruby always is; the acid eats the colour and leaves a white design on the coloured ground. It does not remove the colour from *pot metal*, or glass coloured throughout, but it appears lighter where the acid has been applied. The *fluoric acid* is *very corrosive*, and must not be touched on any account with the fingers, nor must the vapour be breathed.—See HYDRO-FLUORIC ACID.

GLEBA.—A lump.

**GLUE** is the evaporated solution of animal skins. Ox hides, &c., are cleared from foreign matter and prepared for boiling; they are then dissolved by steaming or boiling, and the clear liquor being evaporated and cooled in wooden boxes, is cut with a wire, and dried on nets spread to the air. The varieties are known by their local names, as French, Flemish, Seoteh, and Irish glues. A weaker description of glue is termed size.

*Glue, Portable.*—Glue, 1 lb., melt with water, add brown sugar,  $\frac{1}{2}$  lb., boil till thick, and when cold divide it into moderate-sized pieces. Damped with the mouth, it serves to glue papers, &c., or it will dissolve in warm water.

*Glue, Liquid.*—A solution of shellac in naphtha, made as French polish, has been vended under this title. It is also called Chinese Cement. Used to pieee wood, glass, China, &c.

*Glue, Marine.*—Dissolve by heat 1 part of India-rubber in naphtha, and when melted add 2 parts of shellac; melt until mixed. Pour it while hot on metal plates to cool; when required for use, melt and apply with a brush. A strong cement for wood, whieh is said to rend any where else rather than at the eemented part.

**GLUE IMPERVIOUS TO WATER.**—If a coating of glue or size be brushed over with a decoction of 1 part of powdered nut-galls in 12 of water, reduced to 8 parts, and strained, it becomes hard and solid. It makes a good coat for ceilings to whitewash on, and for lining walls for paper hangings.

**GLYCERINE** mixes with aqueous liquids, with alcohol, and with acetic acid. It is easily scented, it does not evaporate, ferment, or become rancid. It is an excellent cosmetic and softener of the skin.

**GLYCERINE BALSAM.**—White wax and spermaceti, of each 1 oz., almond oil, 8 oz., glycerine, 2 oz., otto of roses, 15 drops.

**GLYCERINE OINTMENT.**—Melt together spermaceti,  $\frac{1}{2}$  oz., and white wax, 1 draehm; put them into a stone mortar,

add glycerine, 1 fluid oz., oil of almonds, 2 fluid oz., and rub them together until cold. Used for chapped hands, &c.

**GODFREY'S CORDIAL.**—A solution of opium and spices in treacle and water. Very frequently it consists of nothing besides laudanum and treacle diluted with water, but some use more ingredients. It is a vicious drug, but the sale is not encouraged by conscientious drug-gists.

1. Mix 6 lb. of treacle with  $4\frac{1}{2}$  lb. of water, add tincture of opium, 8 oz., tincture of ginger, 2 oz., oil of aniseed,  $\frac{1}{2}$  drachm, oil of sassafras, 1 drachm, rectified spirit, 12 oz. Strength: 20 drops in each oz., but by lessening the opium, may be made to contain 5, 10, or 15 drops to the oz.
2. Water, 26 pints, carbonate of potash,  $2\frac{1}{2}$  oz.; dissolve, add 16 pints of treacle; simmer, and remove the scum; cool, and add ready mixed,  $\frac{1}{2}$  oz. of oil of sassafras, 24 oz., tincture of opium, and rectified spirit, 2 pints (all old wine measure.) Contains 16 drops of laudanum in each oz.

**GOLD** is a soft metal of a rich yellow colour. Sp. gr. 19.2 to 19.5; melts at  $2016^{\circ}$  to  $2518^{\circ}$  F. It may be beaten into leaves of the 200,000th of an inch thickness; a single grain in leaf will perfectly cover 56 square inches of surface, or 1 grain may be drawn into a wire 500 feet long. Neither air, water, nor pure acids affect it, but a mixture of nitric and hydrochloric acids dissolves it with ease. Protosulphate of iron throws it down from this solution in the state of fine powder, called *gold bronze*. The equivalent of gold is 197, its symbol Au (aurum.)

**Gold (Artificial.)**—Platinum, 16 parts, copper, 7 parts, zinc, 1 part; melt under animal charcoal.

**Gold, detergent.**—Fresh slaked lime, 1 oz., water, 1 pint. Pearlash, 2 oz., water, 1 quart. Mix the two solutions, agitate occasionally, and in an hour decant and bottle the clear liquor. Used to clean gilding, by washing with a sponge, and afterwards rinsing with clean water.

*Gold, factitious.*—1. Platinum, 16 parts, copper, 7 parts, zinc, 1 part. Cover with charcoal and melt in a crucible.  
—*Hermstadt.*

2. Platinum, 7 parts, copper, 16 parts, zinc, 1 part; as before. These alloys resist ordinary nitric acid, and are very heavy.

*Gold, fulminating*, is prepared by digesting the peroxide or terechloride of gold in liquid ammonia, and drying the powder at a low temperature. The least friction or increase of heat causes it to explode violently. If boiled in a ley of pearlash, or in oil of vitriol, it loses its explosive property, and after washing the powder, the metal may be obtained pure by melting.

*Gold, liquid.*—Agitate ether with terechloride of gold, and after repose decant the clear liquor. Used to write on steel, &c.—See GILDING. The alchemists sought a solution of gold as the *aqua vitae*.

*Gold Powder.*—See BRONZE POWDERS.

*Gold, Terechloride of.*—Nitro-hydrochloric acid, 3 parts, gold, 1 part; dissolve, evaporate until chlorine is disengaged, and crystallize. Red crystals form very deliquescent, soluble in ether, alcohol, and water. This is the most important salt of gold, and is used to form various other salts.

*Gold Size (Oil.)*—Grind yellow ochre or calcined red ochre, to the utmost smoothness with a little boiled oil; add it to boiled oil, and thin with turpentine. Used for oil-gilding; improves by age.

(*Water.*)—Size of parchment or isinglass mixed with finely-ground yellow ochre. Used in burnished or distempered gilding.

*GOUT.*—A painful disease of the limbs. Its prevalence has led to the puffing of nostrums as infallible cures, the basis of almost all of which, whether pill or mixture, is colchicum. In small doses, combined with suitable purgatives, this is considered a valuable remedy, as it alleviates the fit, but in large doses or strong preparations it is considered injurious. The various gout pills and specifics are generally unsuitable.

*Gout Cordial, (Warner's.)*—Rhubarb, 1 oz., senna and red sanders, of each 2 drachms, coriander and fennel seeds, of each 1 drachm, saffron and liquorice, of each  $\frac{1}{2}$  drachm, stoned raisins, 6 oz., proof spirit, 48 oz.; macerate for 14 days, express and filter.—*U. States Dis.* Dose:  $\frac{1}{2}$  to 1  $\frac{1}{2}$  oz.

*GOWLAND'S LOTION, (St. Bar. Hospital.)*—Blanch 3 dr. of bitter almonds, beat them with 6 oz. of water, gradually added; strain, and add 3 grains of corrosive sublimate. Used chiefly as a cosmetic for eruptions and slight sores.

*GRAINS OF PARADISE.*—A stimulant cattle-medicine; employed by fraudulent dealers to adulterate wine, beer, vinegar, and spirits.—The penalty for so using them is £200, and for vending them to brewers, £500.

*GRAMME.*—About 15 grains.

*GREEK FIRE* is supposed to have been a mixture of pitch nitre, and sulphur. It is said to have been used in ancient wars, and was inextinguishable by water.

*GREEN LIQUID FOR TINSEL.*—Sesquiferroeyanuret of iron,  $\frac{1}{2}$  oz., bicarbonate of potash,  $\frac{1}{2}$  oz., gum mastic, 2 oz., methylie or pyroxilic spirit, q. s. Grind the powders finely, mix with the spirit, and apply with a brush.

*GREEN OINTMENT, BLAKE'S.*—Formed of soap, cerate, and arnica montana. A very useful external application.

*GREGORY'S POWDER.*—1. Calcined magnesia, 2  $\frac{1}{2}$  oz., powdered Turkey rhubarb, 1 oz., powdered ginger,  $\frac{1}{2}$  oz.; mix.—*Gregory.*

2. Rhubarb, 2 oz., magnesia, 6 oz., ginger, 1 oz.; mix. *Ph. E. and D.*

3. Magnesia, 10 parts, rhubarb 5, ginger, 3; mix.

The first is the original formula of Dr. Gregory, of Edinburgh, the second that of the Edinburgh and Dublin Pharmacopœias, the third a formula commonly used in the trade. It is a popular antacid, stomachic, and mild purgative, useful in colic, diarrhoea, and dyspepsia. Dose: 20 to 30 grains in water.

GRINDSTONES, ARTIFICIAL.—1. Washed silicious sand, or emery, 3 parts; shellac, 1 part; melt and shape the mixture.

2. *Barclay's.*—Emery mixed with stourbridge loam and a little water, is screwed by a press into a metallic mould, and after drying is fired in a furnace beyond the red heat. The *coarse* emery requires one-half of loam, the *fine* emery one-fourth, the *flour* emery does not require any. Said to wear exceedingly well, and retain the shape given to it for a considerable time in use. Used by dentists and cutlers.

GRINDROD'S REMEDY FOR SPASMS.—Acetate of morphia, 1 grain, sal volatile and sulphuric ether, of each 1 oz., camphor mixture, 4 oz. Mix. One teaspoonful for a dose, in wine or water. An effective remedy.

GROS.—Seventy-two grains.

GUNPOWDER.—An explosive compound of sulphur, nitre, and charcoal. The theoretical proportion for the best gunpowder is 75 parts nitre, 13.23 charcoal, and 11.77 sulphur; but, practically, this proportion is little used. The royal mills at Waltham Abbey use nitre 75, charcoal 15, and sulphur 10 parts; while sporting powder is nitre 78, charcoal 12, and sulphur 10 parts. Different proportions are used in different countries, but the variations are not great; the two examples given may be considered the average.

GUTTA PERCHA is much used in the arts. It is soluble to some extent in coal-tar, naphtha or turpentine, and completely so in benzole, chloroform, and bisulphuret of carbon. The first two solvents are used for applying it to boot-soles, as a paste, the others for more exact purposes. Medals are formed by pressing gutta percha between dies, after dipping it in boiling water to soften it. In the same manner it has been used to copy printing type, and the gutta percha afterwards had a copper facsimile electrotype on it. For wood and metal cuts this is an easy mode of taking copies, as the copper imitations are very durable. It is very useful for taking impres-

sions of medals, &c., for electrotyping, and is used for this purpose by amateurs.

**HAIR, THE.**—This ornament of the human head has received its due share of attention, in the preparation of dyes, pomades, and cosmetics for its especial benefit. Hair dyes and depilatories have already been mentioned.

**HAIR DYE.**—1. Lead filings, 2 oz., hartshorn shavings, 1 oz., oxide of lead, 2 drachms, camphor, 1 drachm, water, 1 pint. Boil for 30 minutes, and pour the clear liquor on diacetate of lead and rose leaves, of each 1 drachm. The liquor constitutes the dye.

2. Liquor potassæ, 1 oz.; add as much oxide of lead freshly precipitated as the liquor will dissolve, and to the clear solution add 3 oz. of distilled water. Does not blacken the skin.

**HAIR POWDER.**—Pure wheat starch, powdered.

*Violet.*—Wheat starch, 6 parts, orris root powder, 1 part; scent at pleasure.

*Hair Powder* was formerly much used for the same purpose that dyes are now resorted to, to hide gray hair. The basis was starch, and the perfume according to choice. It is little employed in the present day, partly from being considered old-fashioned, and partly from the tax of £1 3s. 6d. per year, for the liberty of dusting the hair. The compounds for promoting the growth of hair depend on rosemary, cantharides, and sulphate of copper, as their chief ingredients; but no compound can be of service unless the roots of the hair are sound, though, perhaps, inactive. Washes to cleanse the hair are composed of alkalies as the main ingredient, the chief of which is the carbonate of potash, these combined with the oil and scurf, forming a soapy mixture which is washed out with clean water. A little carbonate of potash in water is an excellent wash, and may be used occasionally when the head requires cleansing; it serves as well for the purpose as the perfumed and coloured disguises of it sold at a high price. The various cosmetics for the hair will be found under their proper heads.—See *Index*.

**HALFORD'S (SIR HENRY) APERIENT PILLS.**—Blue pill, 20 grains, compound pill of coloeynth, 30 grains; mix for 12 pills. This, or equal parts, form the common aperient pill of the druggist.

**HALFORD'S (SIR H.) GOUT PILLS.**—Aeetic extract of colchicum, 2½ grains, Dover's powder, 1½ grains, compound pill of coloeynth, 1½ grains; for one pill. One for a dose.

**HANNAY'S LOTION.**—A solution of potash in water. Used to prevent infection, for which purpose it is useless.

**HARROGATE WATERS.**—Chloride of sodium, 500 grains, chloride of ealcium, 150 grains, chloride of magnesia, 90 grains, bicarbonate of soda, 250 grains, sulphate of soda, 120 grains, water, 1 gallon.

**HEADING FOR BEER.**—Equal parts of alum and sulphate of iron; mixed. Some, also, add 1 part of salt. Used to make beer retain its froth or head.

**HERB TOBACCO.**—Coltsfoot, thyme, betony, and rosemary; mixed. Formerly used in asthma, cough, &c.

**HIERA PICRA.**—*Holy bitter.* Aloes 4 parts, eanella, 1 part; powder and mix. Purgative dose, 10 to 20 grains.

**HOLLOWAY'S OINTMENT.**—Butter, 12 oz., bees'-wax, 4 oz., yellow resin, 3 oz. Melt; add vinegar of eantharides, 1 oz., evaporate, and add Canada balsam, 1 oz., oil of mace, ½ draehm, and balsam of Peru, 15 drops.

**HOLLOWAY'S PILLS.**—Aloes, 4 parts, myrrh, jalap, and ginger, of each 2 parts, and mucilage to mix.

**HONEY.**—The sweet substanee proeured by the bee, and stored in its hive. *Virgin honey* is that which flows naturally from the comb, whereas ordinary honey is forced out by heat and pressure. *Narbonne honey* is very fine-flavoured, from the beautiful flowers of the neighbourhood; from this quality, honey deseends to that of Trebisond, in Asia, whieh is *narcotic* and *poisonous*, being seereted, doubtless, from poisonous plants. Honey is used to make syrups, gargles, pill-masses, and mixtures, but clarified honey is alone used medicinally.

*Characters and Tests, L.*—If when dissolved in water by a heat of  $170^{\circ}$ , and cooled again, it be mixed with iodide of potassium, and dilute nitric acid, it exhibits no blue colour.

**HONEY, CLARIFIED, L.**—Melt the honey by a water-bath, and strain it while hot through flannel. Some add water to the honey, and after melting, skimming, and straining, it is evaporated to its former consistence. In either case it is purified, and known as *despumated* honey. The Dublin directions are to be preferred, as not tending to thin the honey, accidentally or fraudulently.

**HONEY OF BORAX, L.**—Powdered borax, 1 drachm, clarified honey, 1 oz.; mix. Detergent, and cooling in eruptions of the tongue or mouth, as the thrush of children or mercurial sores.

**HONEY OF ROSES, L.**—Dried red-rose petals, 4 oz., boiling water, 24 oz., honey, 5 lb. Divide the petals, macerate them in 16 oz. of water for two hours, press them gently with the hand, and strain. Macerate again with the rest of the water, and pour off the liquid; add to this half the first infusion, mix the honey in, and evaporate by a water-bath, adding the remaining liquor until of a proper consistence. Used chiefly as an agreeable addition to gargles. The vessel should be earthenware for the preparation of honey.

**HONEY SOAP.**—To 1 lb. of soap, add by gradual trituration 1 oz. of honey, and a little scented. Used as a cosmetic. So-called honey soaps often contain no honey at all.

**HONEY WATER.**—1. Grain musk, 16 grains, oils of lavender and cloves, of each,  $\frac{1}{2}$  oz., essence of bergamotte, 2 oz., rose and orange waters, of each, 2 pints, rectified spirit, 8 pints, and a little saffron to colour.—*Bateman.*

2. Essence of musk,  $2\frac{1}{2}$  oz., oil of santal, 20 drops, oil of cloves, 5 drops, oil of lavender, 5 drops, essence of bergamotte,  $2\frac{1}{2}$  oz., rose and orange-flower waters, of each, 2 pints, rectified spirit, 8 pints; mix and filter.

3. Honey, 3 oz., essence of bergamotte,  $\frac{1}{2}$  oz., essence of lemon,  $\frac{1}{4}$  oz., oil of cloves, 12 drops, musk, 12 grains,

ambergris, 6 grains, rectified spirit, 8 pints, orange-flower and rose waters, of each, 2 pints; macerate fourteen days and filter.

4. Spirit of roses, 4 pints, spirit of jasmine and rectified spirit, of each 2 pints, essence of Portugal, 1 oz., essence of vanilla, and musk, of each 4 oz., benzoin, 1½ drachm, orange-flower water, 2 pints; mix.

**HOREHOUND.**—A bitter pectoral herb, used mostly in syrup or candy. The syrup is made by adding 1 lb. of good lump-sugar to each pint of a strong infusion; the candy, with 10 lb. of lump-sugar to each pint, and boiling until it will candy on cooling. Used in coughs and colds.

**HUILE ANTIQUE.**—A name by which hair-oil sometimes sells better. When coloured or scented it goes under various other names, in addition, according to the preparation. The *huile antique* is always almond or olive oil.

*Huile antique à la rose*, is oil scented with otto of rose.

*Huile antique à la fleur d'orange*, is scented with neroli.

*Huile antique à la violette*, is oil digested on orris root until scented

*Huile antique aux millefleurs*, is scented with a few mixed oils.

*Huile antique verte*.—Olive oil, 1 lb., guaiacum, 1 dr.; dissolve, and scent.—*Gray*.

*Huile antique rouge à la rose*.—Oil coloured with alkanet, and scented with otto of rose.

These oils, neatly bottled and labelled, suit those purchasers who admire lard when ticketed bears' grease.

**HUNGARY WATER.**—*Spirit of rosemary*. Rosemary tops, 3 lbs., lavender flowers, 2 oz., rectified spirit, 1 gallon, water, 1 quart; digest and distil one gallon. Used as a cosmetic, and also internally as a stimulant.

**HUNGARY WATER.**—Oil of rosemary, 2 oz., of balm and of lemon peel, of each 1 oz., of mint, 30 drops, essence of orange flowers and essence of roses, of each 1 pint, alcohol, 1 gallon.

**HUXHAM'S TINCTURE OF BARK.**—Made as the compound tineture of bark, *P. L.*, but with brandy instead of proof spirit.

**HYDROCHLORIC ACID.**—Produced by distilling diluted sulphuric acid and salt; acid 98 parts to salt 60 parts.

*Characters and Tests, L.*—“Colourless, sp. gr. 1·16. Exposed to air it emits white aerid fumes, and is totally dissipated by heat. Diluted with water, no preeipitate is found on the addition of chlорide of barium, or ammonia or sesquicarbonate of ammonia. It does not act on gold leaf, even if boiled in it; nor does it throw down anything if protochloride of tin be afterwards added. It does not decolorize a solution of sulphate of indigo. 100 grains of this acid are neutralized by 132 grains of crystallized carbonate of soda.” The acid of commerce has a yellow tinge from holding iron in solution, but this is unimportant for medical uses. If it contains chlorine it will bleach a solution of indigo, and dissolve a little gold leaf, which would cause a preeipitate with protochloride of tin. If mixed with sulphuric acid, it will precipitate with chloride of barium. The little iron contained in ordinary acid is thrown down by saturating it with ammonia. Used in medicine and the arts. Tonie, refrigerant in small doses diluted with water, given as a febrifuge in fever, and employed in gargles. Dose, 3 to 6 drops diluted, but generally the dilute acid is prescribed.

**HYDROCHLORIC ACID, (DILUTED,) L.**—Hydrochloric acid, 5 oz., distilled water, 15 oz.; mix. Sp. gr. 1·043; one ounce is saturated by 168 grains of the crystals of carbonate of soda. Dose, 15 to 25 drops.

*Hydrochloric Acid Gas.*—Obtained by heating strong hydrochloric acid, or equal weights of salt and sulphuric acid. It may be collected over mercury.

**HYDROFLUORIC ACID.**—Prepared by distilling concentrated sulphuric acid with half its weight of fluor spar. The acid is a colourless fluid, which evaporates in dense white fumes on exposure to air. It unites violently with water, for which it has a greater affinity than sul-

phuric acid; it acts rapidly on glass, and must be preserved in leaden vessels. On the flesh it causes deep malignant ulcers, destroying the skin *instantly*, and must therefore never be touched. It is used to etch on glass. When glass is prepared with a design the acid may be poured on it, or powdered fluor spar may be sprinkled on, and sulphuric acid added to liberate the fluoric acid. In etching by vapour the design is made as usual, and a piece of sheet lead is bent to form a basin of the requisite size. Fluor spar and sulphuric acid are mixed in the basin to a paste, the glass is placed over with the design downwards, and heat is gently applied to disengage the gas, which in a few minutes bites in the lines. The glass is then cleaned with warm oil of turpentine. The vapour is very injurious, and must not be breathed. See GLASS, writing on.

**HYDROGEN.**—A gaseous element, and the lightest substance known. It is almost always obtained as follows: In a bottle or retort place some iron or zinc filings, and pour on a mixture of 1 part of oil of vitriol to 5 of water, previously mixed and cooled; the gas is immediately given off, and may be collected in a receiver. To obtain it quite pure the zinc should be pure, and the gas first passed through a solution of potassa, and afterwards through a solution of nitrate of silver. Dumas considers hydrogen a *metal*.

Pure hydrogen is colourless, inodorous, and tasteless; it burns with a pale yellowish flame, and produces water by combining with the oxygen of the atmosphere. If mixed with oxygen or air it explodes instead of burning. 1 part of oxygen, with 5 or 6 of air, or 2 of hydrogen to 1 oxygen, are the most violent; but with proper precautions the last mixture may be quietly burned, and applied to chemical science. 100 cubie inches of hydrogen weigh 2.14 grains: its sp. gr. is 0.0694. A jet of this gas playing on spongy platinum renders it red-hot immediately, and is itself kindled. Hydrogen cannot long be kept in a bladder, Indian-rubber bag, or gasometer; its lightness causes a portion to escape, and the remainder

becomes explosive from mixing with air. It was formerly used to inflate balloons, but coal-gas is now preferred, having practical advantages in use.

*Hydrogen, Carburetted.*—It naturally arises from the mud of stagnant pools, if disturbed. Artificially produced by mixing crystallized acetate of soda and solid hydrate of potassa, of each 40 parts, with 60 parts of powdered quicklime, heating the mixture in a flask, and receiving the gas over water.—*Dumas.*

Colourless, nearly inodorous, does not affect vegetable colours; is not poisonous. Sp. gr. 0.559, 100 cubic inches weigh 17.41 grains.

**HYDROLATUM.**—Distilled waters.

**IMPERIAL.**—The name of a beverage. Cream of tartar,  $\frac{1}{2}$  to 1 oz., orange or lemon peel, 3 oz., boiling water, 3 pints, sugar to taste; digest and pour off the clear liquor when cold. Refrigerant in fever, and refreshing in hot weather.

2. White sugar, 2 lbs., cream of tartar, 3 oz., ginger, 2 oz., water, 3 gallons; boil, add 2 sliced lemons, and when lukewarm add yeast, 4 oz., work for two or three days, and bottle.

**IMPRESSIONS (TO TAKE) OF MEDALS, CASTS, &c.**—Make a composition of mutton suet, 7 parts, white wax, 7 parts, and spermaceti, 32 parts. Melt the whole, and pour it on the east warmed. On cooling, the impression is found to be perfect, and may be electrotyped.

**INCENSE.**—A perfumed composition for burning, made of benzoin, 1 oz., and olibanum, 2 oz. See PASTILLS.

**INDIA PICKLE.**—Vinegar boiled with spice and salt to taste. In this liquor is thrown vegetables which would spoil if not used, yet not wanted immediately, such as onions, cauliflower, cucumbers, broccoli, &c. The vegetables are soaked with hot brine, and then pickled.

**INDIA-RUBBER.**—See CAOUTCHOUC. The best solvents are caoutchoucine, bisulphuret of carbon, and chloroform.

INDIA-RUBBER BLACKING.—*Bryant & James's.* 1. *Paste.*

Ivory blaek, 20 lb., treacle, 15 lb., vinegar and oil of vitriol, of each, 4 lb., India-rubber oil, 3 lb; mix.

2. *Liquid.*—Ivory blaek, 60 lb., treacle, 45 lb., dissolved gum, 1 lb., vinegar, 20 gallons, oil of vitriol, 24 lb., India-rubber oil, 9 lb; mix. The India-rubber oil is made by digesting 18 oz. caoutchouc in 9 lb. of rape-oil, by heat.

INCORROSIve ALLOY.—By preparing an alloy of 97 parts lead to 3 parts tin, a metal is produced upon which the action of pure water is very much decreased; and by using an alloy of 95 parts lead to 5 parts tin, we have a metal on which the action of pure water is scarcely perceptible.

INCORROSIve INK FOR STEEL PENS.—Boil 1½ oz. of well-picked logwood in little more than a quart of water, down to a quart; let it cool; then add 17 or 18 grains of chromate of potash, and stir it briskly. The ink is then ready for use. This ink has been a desideratum ever since the introduction of the steel pen. The world is indebted to Prof. Runge, a German chemist, for the discovery. The new ink resists the action of all ordinary destructive agents better than the old ink. It may be washed, after use, with a wet sponge, or steeped for twenty-four hours in water, or even tested with dilute acids, and yet preserve its original blackness. As it contains neither gum nor acid, and is a perfect liquid, it neither thickens, deposits a sediment, nor corrodes the steel of the pen. A quart of it may be made for twopence.

INDIGESTION, REMEDIES FOR.—1. *Hutchinson's.*—Quicklime, ½ oz., slaked with a little water, add water, 1½ pint, bruised einchona bark, 1 oz.; cover and macerate for 3 hours, occasionally stirring them; decant the clear liquor, and add to it, tincture of bark, 2 oz., nitric ether, 3 drachms, syrup of orange-peel, 1 oz.; mix and keep closely corked. Dose: 1 wine-glassful 2 or 3 times a-day, with an occasional saline aperient.

2. *Babington's.*—Infusion of calumba, 6 oz., carbonate of

potass, 1 draehm, compound tinetur of gentian, 3 draehms; mix. Dose, 2 or 3 table-spoonfuls daily, 1 hour before dinner.

3. *Graham's.*—Decoction of bark, 3 oz., compound infusion of gentian, 1 oz., tinetur of easearilla, 2 draehms, liquor potassæ, 1 drachm; mix. Dose: 2 table-spoonfuls twice a day.

**INDESTRUCTIBLE LABELS FOR BOTTLES.**—Coat the label with white of egg, and steam it until it becomes opaque, then dry it in an oven at  $212^{\circ}$ . The albumen becomes hard and transparent, and is unaffected by oils or acids.

**INDIGO.**—A blue vegetable substance used in dyeing, and as a test. In its commercial state it contains a large mass of impure matter, but may be purified in various ways, the best of which is Mr. Taylor's process. Mix 1 part of indigo with 2 parts of plaster-of-paris, make a paste with water, and spread it  $\frac{1}{8}$  inch thick on an iron plate. When dry, heat the plate underneath; the surface of the mass becomes covered with crystals of pure indigo, which may be removed with a spatula. Chlorine does not act on indigo in the dry state, even at the temperature of  $212^{\circ}$ , but on contact with water the blue colour is instantly destroyed, and cannot be restored.

*Indigo, Sulphate of.*—Indigo, 1 lb., concentrated sulphuric acid,  $4\frac{1}{2}$  lb. Add the powdered indigo by degrees to the acid, stirring well to mix thoroughly, and let the mixture stand 48 hours. It may be diluted with water, or neutralized with carbonate of potash as required.

*Indigo Test-Paper.*—Dip paper in the solution of indigo, rinse it in a weak alkaline solution, then in clean water, and let it dry.

*Indigo, Solution of.*—Boil for half an hour 10 grains of powdered indigo in  $2\frac{1}{2}$  oz. of solution of carbonate of soda or caustic soda, then add 8 grains of muriate of tin, when a yellow solution of indigo will result.

INFUSIONS are solutions of vegetable matter in water, differing from decoctions in not being boiled. They are most of them best prepared in cold water, but the College directs hot water to be used in each case. They must only be prepared when wanted, as they soon spoil. While macerating, they should be lightly covered.

*Infusion of Yellow Bark, L.*—Bruised yellow bark, 1 oz., boiling distilled water, 1 pint. Macerate for 2 hours, and strain. Dose: 1 to 2 oz.

*Infusion of Yellow Bark, (Concentrated,) L.*—Coarsely powdered yellow bark, 3 lbs., distilled water, 6 pints, rectified spirit, a sufficient quantity. Macerate the bark as directed for extract of bark, evaporate the mixed infusions to one-fourth, and when the dregs have subsided, pour off the clear, and strain the rest. Mix and evaporate again until the sp. gr. is 1.200, and when cold, add 3 drachms of spirit to each oz. Finally, let it stand for 20 days, to clear. Two oz. of this require 6 oz. water to reduce it to the strength of the weaker infusion.

*Infusion of Pale Bark, L.*—Prepared as infusion of yellow bark.

*Infusion of Pale Bark, (Concentrated,) L.*—Prepared as concentrated infusion of yellow bark.

*Infusion of Buchu, L.*—Buchu, 1 oz., boiling distilled water, 1 pint. Macerate for 4 hours in a lightly-closed vessel, and strain. Used in affections of the bladder or urinary organs. Dose: 1 to 2 oz., generally combined with alkalies, as liquor potassæ, &c.

*Infusion of Calumba, L.*—Sliced calumba, 5 drachms, boiling distilled water, 1 pint. Macerate for 2 hours, and strain. Bitter tonic, aromatic. Dose: 1 to 1½ oz. Used in dyspeptic cases—in vomiting, fever, diarrhœa, and dysentery.

*Infusion of Cascarilla, L.*—Bruised cascarrilla, 1½ oz., boiling distilled water, 1 pint. Macerate for 2 hours, and strain. Tonic, febrifuge. Uses similar to those of calumba. Dose: 1 to 1½ oz.

*Infusion of Catechu, (Compound,) L.*—Catechu powdered, 6 drachms, bruised cinnamon, 1 drachm, boiling

distilled waters 1 pint. Macerate for an hour, and strain. Astringent, aromatic. Dose: 1 to 2 oz. three times a day in diarrhoea. May be combined with opium or chalk, if necessary.

*Infusion of Chamomile, L.*—Chamomile, 5 drachms, boiling distilled water, 1 pint. Macerate for 10 minutes, and strain. Stomachic, emetic. Dose: 2 to 6 oz. As an emetic, 8 to 20 oz. Externally used to bathe painful joints, and relieve toothache.

*Infusion of Chiretta.*—Chiretta, 3 drachms, cold water, 1 pint.

*Infusion of Cloves, L.*—Bruised cloves, 3 drachms, boiling distilled water, 1 pint. Macerate for 2 hours, and strain. Aromatic, stimulant. Used in flatulence, or sickness. Dose: 1 to 2 oz.

*Infusion of Cusparia, L.*—Bruised cusparia, 5 drachms, boiling distilled water, 1 pint. Macerate for 2 hours, and strain. Aromatic, tonic. Used as a tonic in dyspepsia, and in fever. Dose: 1 to 2 oz.

*Infusion of Foxglove, L.*—Foxglove-leaves dried, 1 dr., spirit of cinnamon, 1 oz., boiling distilled water, 1 pint. Macerate the foxglove in the water for 4 hours, strain, and add the spirit. Sedative, diuretic. Used in dropsy, and diseases of the heart. Dose: 2 to 8 drachms.

*Infusion of Gentian, (Compound,) L.*—Gentian sliced, and dried orange-peel, of each 2 drachms, lemon-peel, 4 drachms, boiling distilled water, 1 pint. Macerate for an hour, and strain. Bitter tonic. Used in dyspepsia. Dose, 1 to 2 oz., three times a day.

*Infusion of Hops, L.*—Hops, 6 drachms, boiling distilled water, 1 pint. Macerate for 4 hours, and strain. Tonic, stomachic. Dose: 1 to 1½ oz.

*Infusion of Horse-radish, (Compound,) L.*—Sliced horse-radish, and bruised mustard, of each 1 oz., compound spirit of horse-radish, 1 oz., boiling distilled water, 1 pint. Macerate the horse-radish and the mustard in the water for two hours, strain, and add the spirit.

*Infusion of Linseed, (Compound,) L.*—Bruised linseed, 6 drachms, fresh sliced liquorice, 2 drachms, boiling distilled water, 1 pint. Macerate for 4 hours, and

strain. Demulcent, mucilaginous, nutritious. Employed to allay irritation in cough, gonorrhœa, &c. It is often combined with liquorice, lemon-juice, and sugar-candy. Dose: at pleasure.

*Infusion of Orange, (Compound,) L.*—Dried orange-peel,  $\frac{1}{2}$  oz., lemon-peel, 2 drachms, bruised cloves, 1 drachm, boiling distilled water, 1 pint. Macerate for 15 minutes, and strain. Stomachic. Used chiefly as a vehicle for bitter tinctures, salines, or ammonia. Dose: 1 to 2 oz.

*Infusion of Quassia, L.*—Quassia sliced, 2 scruples, boiling distilled water, 1 pint. Macerate for 2 hours, and strain. Bitter tonic, stomachic. Used in dyspepsia. Dose: 1 to 2 oz.

*Infusion of Rhatany, L.*—Rhatany, 1 oz., boiling distilled water, 1 pint. Macerate for 4 hours, and strain. Astringent. Dose: 1 to 2 oz.

*Infusion of Rhubarb, L.*—Sliced rhubarb, 3 drachms, boiling distilled water, 1 pint. Macerate for 2 hours, and strain. Stomachic, tonic, purgative. Dose: 1 to 3 oz., repeated if necessary.

*Infusion of Rose, (Compound,) L.*—Red rose petals dried, 3 drachms, diluted sulphuric acid,  $1\frac{1}{2}$  drachms, sugar, 6 drachms, boiling distilled water, 1 pint. Divide the petals, pour the water on them in a glass or porcelain vessel, then add the acid. Macerate for 6 hours, strain, and add the sugar. Astringent, refrigerant. Used in fever, sore-throat, diarrhœa, and to check profuse sweating. Dose: 1 to 2 oz., or more.

*Infusion of Senna, (Compound,) L.*—Senna, 15 dr., sliced ginger, 4 scruples, boiling distilled water, 1 pint. Macerate for an hour, and strain. Cooling, purgative, often combined with sulphate of magnesia. Dose: 2 to 4 oz., repeated as required. An infusion of senna made in cold water does not gripe so much as that prepared by heat.

*Infusion of Senna.*—The addition of 1 grain of nitrate of potash to each fluid ounce of infusion of senna will preserve it unchanged for a considerable period.

*Infusion of Serpentine, L.*—Serpentine,  $\frac{1}{2}$  oz., distilled

water, 1 pint. Macerate for 4 hours, and strain. Stimulant, tonic. Used in low fevers. Dose: 1 to  $1\frac{1}{2}$  oz., often repeated.

*Infusion of Valerian, L.*—Valerian,  $\frac{1}{2}$  oz., boiling distilled water, 1 pint. Macerate for 30 minutes, and strain. Tonic, anti-spasmodic. Dose: 1 to 2 oz.

**INK, Black.**—In many cases the ingredients are ordered to be boiled, but they are best made by cold maceration. Logwood darkens ink, but it leaves a scum on the surface, and clogs the pen used.

1. *Lewis's.*—Bruised galls, 3 lbs., gum and copperas, of each 1 lb., vinegar, 1 gallon, water 2 gallons; macerate, with frequent shaking, for 14 days. Product 3 gallons.
2. *Wollaston's.*—Galls, 1 oz., gum,  $\frac{1}{2}$  oz., cloves,  $\frac{1}{2}$  dr., copperas,  $\frac{1}{2}$  oz., water, 8 oz.; digest.
3. *Ribaucourt's.*—Galls, 1 lb., logwood,  $\frac{1}{2}$  lb., gum, 6 oz., copperas, 8 oz., blue vitriol and sugar, of each 1 oz. Boil the galls and logwood in 20 pints of water down to 10 pints—strain; dissolve the other ingredients, and bottle.
4. *Brande's.*—Galls, 6 oz., water, 6 pints; boil, and add 4 oz. each of gum and copperas; bottle, and add to each pint, 1 grain of bi-chloride of mercury, or 4 drops of creosote.
5. *Ure's.*—Galls, 12 lbs., gum, 5 lbs., copperas, 5 lbs., rain-water, 12 gallons. Boil the galls in 9 gallons of water for 3 hours, adding water as it evaporates. Pour off the clear, add the strained solution of gum, dissolve the copperas separately; and mix the whole. To make 12 gallons.
6. *Broome's.*—Galls, 10 lbs., logwood, 4 lbs., copperas, 4 lbs., brown sugar, 1 lb., water,  $13\frac{1}{2}$  gallons, gum, 4 lbs. Boil the galls, logwood, and gum separately, mix the liquors, add the copperas; and make up  $13\frac{1}{2}$  gallons.
7. *Prerogative Court Ink.*—Galls, 1 lb., gum, 6 oz., alum, 2 oz., copperas, 7 oz., kino, 3 oz., logwood, 4 oz., water, 8 lbs.—*Gray.* Used to write on parchment.

8. *Patent or Asiatic.*—Galls and logwood, of each 2 lbs., copperas, 1 lb., gum, 8 oz., pomegranate bark, 4 oz., water, 1 gallon; macerate 14 days, with frequent agitation—this quantity of ingredients to so little water would form a mud. It is an error to suppose that by lessening the amount of liquid (beyond a certain extent) the strength of the ink is increased; it is often the reverse.
9. Galls, 1 lb., copperas, 8 oz., gum, 4 oz., sugar-candy, 4 oz., water, 3 quarts; digest until full-coloured, strain, and bottle.

*Blue Black.*—Bruised galls, 1 lb., water, 6 quarts; steep for ten days, add iron filings, 1 oz., sulphuric acid, 1 oz., copperas, 3 oz.; stir frequently, and in a few days strain the liquor. Powder 1 oz. of indigo very finely, dry it by a strong heat, and stir it into 4 oz. of the strongest sulphuric acid; reduce the product by heat to the consistency of syrup. After twenty-four hours add 1 pint of water, and mix with the ink. The free acid must now be neutralized with chalk or whiting. A little of this ink, properly prepared, should colour a pint of clear water throughout immediately.

*Ink, Copying.*—A description of black ink, used for taking impressions or copies of recently-written letters and invoices. Mr. Brande directs 1 oz. of brown sugar to be added to his writing-ink, No. 4, for the purpose of copying. Another form is, water, 13 drachms, gum,  $\frac{1}{2}$  oz., liquorice, 20 grains—dissolve; add 1 drachm of lamp-black, ground with a tea-spoonful of sherry wine. If the black be greasy, it should first be heated to redness in a crucible; this appears more like a jest than a recipe. Trouble and expense, together with a mixture which will not copy, might be saved by purchasing a bottle which would copy. Ink to which sugar or sugar-candy is added, does copy, but if the saccharine proportion is large, it will impress when not required to do so, as in folding a letter or closing a book. The perfection of this description of ink is, that it shall soon dry, so as to be used instead of other ink, yet be

capable of giving a perfect copy within a few hours after being written. The process is as follows: thin tissue-paper, loose or bound, is wetted with a flat brush and water, the letter is placed on one side, and a piece of oiled paper on the other, so as to prevent the ink coming through more than one leaf; pressure is then applied by a copying machine, and the book, on being opened, displays a faint but perfect copy, which dries black. As this method will not serve where the press would have to be carried, an ink is also manufactured for copying by merely passing the hand over the damp paper covering the original writing.

*Copying.*—Myrobalans, bruised, 48 lbs., vinegar, 4 gallons, water, 56 gallons; steep for one month, then add copperas, 22 lbs., gum, 14 lbs., ox-gall, 1 quart, whiting, 1 oz., and strain.

*Ink, Horticultural.*—Copper, 1 part, dissolve in nitric acid, 10 parts, and add water, 10 parts. Used to write on zinc or tin labels.

*Ink, Writing.*—Bruise 28 lbs. of galls and 42 lbs. of myrobalans; steep them in 60 gallons of water for a month. Strain, and add 10 lbs. of gum, and 14 to 20 lbs. of copperas. Product, 60 gallons.

*Ink, Japan.*—Instead of preparing the ink with plain copperas, it is first ordered to be calcined to whiteness or sprinkled with nitric acid. More gum and some sugar are added, to increase the glossiness.

*Inks, Permanent.*—Many attempts have been made to improve the manufacture of the writing-inks at present used, but the subject offers much greater difficulties than might appear to an uninterested person. The diluted acids, chlorine, and the alkalies, present an easy means of removing ordinary ink from the surface of paper. Some able chemists have investigated the subject of improvement—and left it where they found it, as far as usefulness was concerned. Dr. Ure states that vanadate of ammonia, mixed with solution of galls, forms the best writing-ink hitherto known, as it is perfectly black, and resists all reagents which do not at the same time destroy the paper. The price of

vanadate of ammonia is from 1s. to 1s. 6d. per *grain*, whereas I have seen *good* commercial ink sold at 1s. to 1s. 6d. per gallon. A gluten ink, recently recommended, and highly praised, was tried at the Bank of Scotland, but soon abandoned as unsuitable. The inks recommended by Mr. Coathupe, and others, as permanent writing fluids, are thus prepared:—

1. *Ink, Shell-Lac.*—Boil 1 oz. of borax, in 18 oz. of water; add 2 oz. shell-lac, and when a solution is formed, cool, and filter. Add 1 oz. of mucilage, and a mixture of indigo, with lamp-black to colour it; let the dregs subside, then decant the clear for use.—*Coathupe*.
2. *Ink, Carbon.*—Mix good Indian-ink with common writing-ink. A useful ink for ticket and shop-window labels.
3. *Bracannot's.*—Dantzig potash, 20 parts, leather clippings, 10 parts, sulphur, 5 parts; boil with water to dryness, then melt by heat; add water to dissolve, and filter for use.

The deficiency in these inks is the want of *flow*, combined with the extra trouble and expense of manufacturing. They are very rarely used as ordinary business inks.

All the usual inks are formed of galls and iron, with other ingredients to assist the effect, and lessen the expense. The copperas should generally be  $\frac{1}{3}$  of the weight of the galls, but good galls will bear a larger quantity; gum assists in keeping the ingredients suspended, and in preserving the writing from the action of the air; sugar-candy or pomegranate peel adds to the gloss; cloves and creosote prevent mouldiness. Vinegar and blue vitriol corrode steel pens, and are not suitable for ingredients in ink. The best Ink should be incorrosive, easy-flowing, and permanent; it will therefore contain few ingredients, but those few the best for the purpose.

*Packer's Ink*, for bales and trusses, is merely the dregs from which writing ink is strained.

*Inks, Coloured.—Blue.*—1. A solution of sulphate of indigo, neutralized with potash or soda.

2. Prussian or Chinese blue, 6 parts, oxalic acid, 1 part;

triturate to extreme fineness with a little water; add a little mucilage, and dilute with water.

3. Triturate to a paste, Chinese blue, 1 part, with strong hydrochloric acid, 2 parts; and after 30 hours digesting, dilute with water.
4. *Read's.*—A preeipitate of iodide of iron, with ferro-prussiate of potash.
5. Dissolve in water, proto-sulphate of iron, 1 part, then dissolve ferro-cyanide of potassium, 2 parts, in water. Pour the cold solution of iron into the other solution, so long as a precipitate falls; wash the preeipitate on the filter with pure water, until it begins to drop blue, when it may be dried or dissolved in distilled water. This is the soluble Prussian blue.
6. Perchloride of iron, 1 part (or any other persalt of iron,) ferro-cyanide of potassium, 2 parts; proceed as last. This is the soluble ferro-eyanide of potassium and iron.

*Green.*—1. Verdigris, dissolved in vinegar.

2. Cream of tartar, 2 draehms, verdigris,  $\frac{1}{2}$  oz., water, 5 oz.; boil, and filter.
3. Dissolve sap-green in water, and add some alum.
4. Add gamboge to blue ink.

*Red.*—1. Brazil wood, 4 oz., vinegar, 1 pint; maeerate 3 days, boil, add  $\frac{1}{2}$  oz. of alum, and strain.

2. White vinegar, 20 gallons; heat over a clear fire, and when just about to boil, add 21 lbs. of Brazil wood; let it simmer, and add  $11\frac{1}{2}$  lbs. of alum. Simmer gently until the alum is dissolved, then strain through elean flannel. Add suffieient of the following solution to produce the desired shade:—eochineal and carbonate of potash, each 2 oz., boiling water, 2 quarts; mix, and add alum, 1 oz., cream of tartar, 4 oz.
3. Carmine, 12 grains, or lake, 30 grains, solution of ammonia, 3 oz.; dissolve, and add 1 seruple of gum.

*Yellow.*—1. Add a little alum to a solution of gamboge. 2. Boil for 1 hour 8 oz. of French berries, and 1 oz. of alum, in 1 quart of water; strain, and add 1 oz. of gum.

*Violet.*—Add gum and alum to a decoction of logwood.

*Purple.*—Add muriate of tin to a decoction of logwood.

*Brown.*—Dissolve by heat,  $\frac{1}{2}$  oz. of catechu, in 8 oz. of water, add to it a solution of bichromate of potash, 1 drachm, in  $1\frac{1}{2}$  oz. of water, until the required shade is produced; then strain.

*Ink, Label.*—For bottles, &c. 1. Copal, 1 part, oil of lavender, 8 parts; dissolve by heat, and add lamp-black, or vermillion, to colour.

2. Asphaltum, 1 part, oil of turpentine, 4 parts; dissolved, and add lamp-black or printers' ink, to colour.
3. Flake white, ground with copal varnish. For dark or black bottles.

These inks are intended to label bottles, containing acids or alkalies, which would destroy most fluids. Where it is convenient, the glass may have the name etched on it by hydrofluoric acid.

The following are of another kind, being used for metal labels, such as the zinc plates used in gardens.

*Zinc Labels.*—1. Verdigris and sal ammoniac, of each 1 drachm, lamp-black,  $\frac{1}{2}$  drachm; powder, and mix in water, 10 drachms.

2. Dissolve 5 grains of chloride of platinum in 1 oz. of pure water.

*Zinc, Steel, or Tin Labels.*—1. Acetic acid, diluted, 2 oz., sulphate of copper, 1 oz., sal ammoniac,  $\frac{1}{2}$  oz., lamp-black to colour.

2. Use a solution of nitrate of copper, or of copper, 1 part, nitric acid and water, each 10 parts.

*Ink, Lithographic.*—1. Tallow, shellac, wax, soap, of each 2 oz., lamp-black,  $\frac{1}{2}$  oz.; proceed as for lithographic crayons.—*Fielding.* See *Crayons*.

2. Soap, soda, and mastic, of each 1 oz., shellac, 5 oz., lamp-black, 3 drachms.—*Lasteyrie*.

*Ink, Marking.*—The basis of this is generally nitrate of silver; and it may be discharged from cloth by using liquid chlorine, ammonia, or cyanide of potassium, without injuring the fabric on which it is written. These inks are, therefore, not indelible. There are two sorts made; those with, and those without preparation.

1. *With Preparation.* *The Ink.*—Hot distilled water, 6 drachms, nitrate of silver, 2 drachms; mix; add muci-

lage, 2 draehms, and sap-green to colour. Moisten the linen, &c., with a solution of carbonate of soda, holding a little sap-green or colouring matter, to show the part when dry. Rub the cloth smooth, when dry, with the bowl of a spoon, and write on it with the ink and a quill-pen. When the writing is completed, pass over it a hot iron, or hold the part to the fire until it turns black.

2. *Without Preparation.*—Nitrate of silver and bitartrate of potash, of each 1 oz.; mix, add liquor of ammonia, 4 oz., dissolve and add white sugar, 6 draehms, gum Arabic, 10 draehms, arehil,  $\frac{1}{2}$  oz., and water to make 6 fluid oz.—*Redwood.*

*Ink, Ticketing, for Drapers, Grocers, &c.*—These inks are generally used on pasteboard, for shop-windows, and are made as follows. Dissolve 1 oz. of gum Arabic in 6 oz. of water, and strain; this is the mucilage.

*Black.*—Drop-black, powdered, and ground with mucilage to extreme fineness.

For *blue*, ultramarine is used in the same manner; for *green*, emerald green; *white*, flake white; *red*, vermillion; *lake*, or carmine; *yellow*, chrome yellow. When ground too thick, they are thinned with a little water. These are all laid on the card with a small brush. The cards are often white, with black letters shaded with colour, but very frequently the card is coloured by passing a flat brush over it, with any colour prepared as above, and when it is dry writing with white letters and shading with black. These cards may be sized with thin glue, and afterwards varnished, when it is desirable to preserve them.

*Ink, Indian.*—The imitations of it are made up of scented lamp-black and a solution of glue, pressed in a mould until dry, and afterwards ornamented with various devices. Or, seed lac, 4 draehms, borax, 1 draehm, water, 10 oz.; dissolve, filter and add lamp-black to make a paste. Scent, &c., as before.

*Ink, Perpetual.*—Melt pith, and add enough lamp-black to colour it. Used, while soft, to fill the letters on marbles and tombstones.

*Ink, Printing.*—This is made by mixing blaek or coloured pigments with a varnish prepared for the purpose. Set on a fire, in a large iron pot, 12 gallons of elear linseed oil, boil, and stir until it smokes, then ignite it, remove it from the fire, and let it burn until a sample will draw into strings between the fingers. Put the lid on to extinguish the flame, then add 1 lb. of resin to each quart of oil; dissolve, and add gradually in sliess 1 $\frac{3}{4}$  lb. of soap; heat the pot until the solution is eomplete, when the varnish is ready.—Two sorts are kept, one thick, and the other thin, so as to mix when required; the differencee is caused in the boiling and firing being kept up for different periods. For large printing-type a thin ink is required, as thick ink would only print in patches; for small type very stiff ink is used, to prevent it running off. For making black ink, mix together mineral lamp-blaek, 8 lbs., vegetable black, 7 lbs., indigo and Prussian blue, of eaeh 5 oz., Indian red, 2 oz.; grind this with suffieient varnish, gradually added as the grinding goes on. In most manufaetories steam is em-ployed for this purpose. For coloured ink use coloured pigments, aeeording to the required shade.

*Savage's Printing Ink.*—Mr. Savage was a printer, and invented this method of making an extemporaneous superfine ink, for whieh he was rewarded with the large medal of the Soeiety of Arts. Pure balsam of copaiba, 9 oz., lamp-blaek, 3 oz., indigo and Prussian blue of eaeh 5 draehms, Indian red,  $\frac{3}{4}$  oz., dry yellow soap, 3 oz., mix and grind to the utmost smoothness.

*Ink, Gold and Silver.*—The metal leaf is ground with honey until of a fine powder, it is then washed to remove the honey, and the powder is mixed with gum-water for use.

*Inks, Sympathetic.*—Fluids whieh, when written with, appear colourless until means are employed to render them visible. The heat of a fire, if strong, will make most of them plainly diseernible.

1. Write with a solution of copperas, then wash it with gall infusion, it turns black, or blue with prussiate of potash.

2. Write with onion-juice or a solution of sal ammoniac and sulphate of copper, equal parts: heat turns it yellow.
3. A weak solution of nitrate of mercury: heat turns it black.
4. A solution of sulphate of copper. Turns blue with vapour of ammonia.
5. Rice water or starch. Turns blue when washed with iodine in alcohol.
6. Salt, or any of the common acids largely diluted. Turn dark when heated.

*Ink Powders.*—The ingredients for black ink, separately powdered and mixed. The proportions of any of the receipts given will serve as a guide; for use, they are added to a sufficient quantity of water. There is no advantage in preparing ink-powders, and they are inferior in colour to the ordinary inks.

*Ink, to Restore, when Faded.*—Wash it with a strong infusion of galls, or a solution of prussiate of potash, to which a slight acidity is given with muriatic acid.

*Ink, to Remove.*—Stains on linen, &c., may be removed by dilute oxalic, muriatic, or tartaric acid and hot water, or by a solution of chloride of lime. The article must then be rinsed well with warm water only. To discharge marking-ink, use a solution of cyanide of potassium, &c.—See page 140.

**IODIDE OF NITROGEN.**—The black powder which subsides from a mixture of iodine and ammonia. It may be separated on a filter, washed, and dried. It is then an explosive compound, which will detonate on the touch of a feather, and sometimes without any known cause. It produces, on explosion, the violet-coloured fumes of iodine. The preparation of this substance should be small in quantity.

**IODIDE OF QUININE.**—Make a solution of 24 parts of iodide of potassium in 8 parts of water, and add this by drops to a strong solution of 20 parts of sulphate of quinine. Wash the precipitate quickly, and dry in the shade.

**IODINE.**—A preparation from various marine plants, which have the power of secreting it. It is found in many

other substances, but not in sufficient quantity for the purpose of manufacturers, who always use kelp for its production. It is not prepared on the small scale. The P. L. places it in the *Materia Medica*.

*Characters and Tests, L.*—Black, metallic lustre, odour resembling chlorine. By heat it melts, and then sublimes in violet vapours. It is soluble in rectified spirit, and this solution colours starch blue. 39 grains of iodine dissolved with 9 grains of lime in 3 oz. of water, by heat, produce a solution of a yellow or brownish colour, [but it is colourless if there be above 2 per cent. of water or other adulteration.—E.] Iodine is soluble in alcohol or ether, but requires 7000 parts of water for its solution. It volatilizes when water is present, under 100° F., fuses at 225° F., and boils at 347°. Its sp. gr. is variously stated 3.08 to 5.4; the usual estimate is 4.948, and the density of its vapour 8.716. Used as a test, and in medicine; externally it stains the skin. It is rarely given alone internally, the iodide of potassium being preferred, or a combination of both. The dose of iodine alone is  $\frac{1}{2}$  grain in spirit, or in water, with  $\frac{1}{2}$  grain of iodide of potassium.

**IRON**, when administered as a remedial agent, acts as a tonic, and emmenagogue. It is mostly given in the form of a salt, as the sulphate or carbonate; and when its filings are administered, they are supposed to undergo a rapid change in the stomach, being oxidized by the gastric juice. Iron is not poisonous, but the continued administration of large doses is injurious; it acts best on enfeebled frames, where no inflammation or fever exists. The filings are occasionally given in treacle as a vermifuge, a teaspoonful at night, or night and morning. Iron has a sp. gr. of 7.8, it only fuses at a high temperature, is extremely ductile, and a wire  $\frac{1}{36}$  of an inch in diameter will sustain 60 lbs. weight. Its equivalent is 28, its symbol Fe (Ferri.)

*Iron, Ammonio-Chloride of, L.*—Sesquioxide of iron, 3 oz., hydrochloric acid,  $\frac{1}{2}$  pint, hydrochlorate of ammonia, 2½ lbs., distilled water, 3 pints; mix the sesquioxide with the acid, and digest it in a sand-bath, fre-

quently stirring until liquefied, then add the hydrochlorate, first dissolved in the water, strain and evaporate the solution until the salt is dry, then powder it. Little used. Dose: 4 to 15 grains.

*Characters and Tests.*—In powder, of an orange colour, and soluble in proof spirit or water. Either solution gives off ammonia on the addition of potash, and from each 100 grains of salt, 7 grains of sesquioxide of iron are precipitated.

*Iron, Ammonio-Citrate of, L.*—Sulphate of iron, 12 oz., carbonate of soda,  $12\frac{1}{2}$  oz., citric acid, 6 oz., solution of ammonia, 9 oz., boiling distilled water, 12 pints; dissolve the sulphate and carbonate separately, (each) in 6 pints of water, mix the hot solutions, and let the precipitate subside, pour off the liquor, and wash the powder repeatedly with water, and having added the acid, dissolve it by heat. When cool, add the ammonia, and evaporate to the thickness of a syrup, spread this on earthenware tiles, and dry by a gentle heat; keep it in a well-stoppered vessel. Tonic, emmenagogue. Dose: 4 to 15 grains.

*Iron, Potassio-Tartrate of, L.*—Sulphate of iron, 4 oz., sulphuric acid,  $\frac{1}{2}$  oz., nitric acid, 1 oz., solution of ammonia, 10 oz., bitartrate of potash in powder, 2 oz., distilled water, 4 gallons. Dissolve the sulphate in a pint of water with the sulphuric acid, then, heat being applied gradually, add the nitric acid. Boil to the consistence of syrup, and mix with the rest of the water, then add the ammonia to throw down the sesquioxide, which must be washed and set aside for 24 hours. Then heat the bitartrate, mixed with half a pint of water, to  $140^{\circ}$ , and add to it gradually the moist sesquioxide, free from the supernatant liquor. What remains undissolved of the sesquioxide must be separated by a linen cloth; then evaporate the clear liquor until the salt is dried, or it may be dried as the ammonio-citrate of iron. Tonic. Dose: 5 to 20 grains.

*Characters and Tests, L.*—Soluble in water. The solution does not change the colour of litmus or turmeric; it does not turn blue on the addition of ferrocyanide of

potassium, nor does it precipitate with any alkali. If heated with potash, each 100 grains of the salt throws down about 34 grains of sesquioxide of iron.

*Iron, Sesquioxide of, L.*—Sulphate of iron, 4 lbs., carbonate of soda, 4 lbs. 2 oz., boiling water, 6 gallons. Dissolve the sulphate and carbonate separately (each) in three gallons of water, mix the hot solutions, and let the precipitate subside, pour off the liquor; repeatedly wash the powder and dry it. Tonic. Used in chlorosis, and tie-douloureux, in which it is sometimes very effectual. The best formula is, sesquioxide of iron, 1 scruple, sulphate of quinine, 1 grain, eamphor, 3 grains; mix; for one powder. To be taken after a dose of aperient medicine has operated on the bowels. Used properly, this prescription rarely fails to relieve, if the complaint is tie-douloureux; but if the stomach is foul and the bowels constipated, tonics are not admissible until that state is altered. Sometimes 1 to 4 drachms of this salt have been given several times daily, not only without advantage, but resulting in positive injury, from the excess of iron in the stomach and bowels. The doses should be small, not given too often, and intermitted with aperients.

*Characters and Tests, L.*—It is dissolved in diluted hydrochloric acid, almost without effervescence, and is thrown down by potash. The remaining liquor, when strained, is colourless, and if hydrosulphuric acid, or ferrocyanide of potassium is added, it is not coloured.

*Iron, Sulphate of, L.*—Commercial sulphate of iron, 4 lbs., sulphuric acid, 1 oz., iron wire, 1 oz., distilled water, 4 pints; mix the acid and water, add the sulphate of iron to them, then apply heat, frequently stirring until the sulphur is dissolved, strain while hot, and let it crystallize, evaporate the remaining liquor for more crystals, and dry them all.

*Characters, L.*—Bluish green, soluble in water. Tonic, emmenagogue. Dose:  $\frac{1}{2}$  to 5 grains.

**ISINGLASS CEMENT.**—Dissolve isinglass in glacial acetic acid, and reduce it to a thin jelly. It does not require warming for use.

**ISOMORPHOUS.**—Having the same form.

**ISOMERIC.**—Having the same composition.

**IVORY, TO BLEACH.**—Stained ivory may be bleached by steeping it from two to four hours in a watery solution of sulphurous acid.

**JAPAN BLACK.**—1. Burnt umber, 4 oz., true asphaltum, 2 oz., boiled oil, 2 quarts. Dissolve the asphaltum by heat in a little of the oil, add the burnt umber ground in oil, and the remainder of the oil, mix, cool, and thin with turpentine. Flexible.  
2. Shellac, 1 part, wood naphtha, 4 parts, dissolve, and colour with lamp-black. Inflexible. Both are used to japan leather.

**JAPAN, TRANSPARENT.**—Oil of turpentine, 4 oz., oil of lavender, 3 oz., camphor,  $\frac{1}{2}$  drachm, copal, 1 oz.; dissolve. Used to Japan tin, but quick copal varnish is mostly used instead.

**JELLY, ARROWROOT.**—Arrowroot, 1 tablespoonful, mix to a smooth paste with a little cold water, pour on it half-a-pint of boiling milk, stir some salt in, and boil it a minute or two. Add a little nutmeg and lump sugar, and when thought requisite a tablespoonful of wine. Much better prepared with milk for most purposes than when made with water, but water must be used when milk disagrees with the patient.

**JELLY, BISCUIT.**—Boil soaked and crushed biscuits in some milk-and-water, with a little salt; when cooked sufficiently, add sugar to taste, and some cinnamon powder. A little wine may also be added, in diarrhoea.

**JELLY, CORSICAN MOSS.**—Corsican moss, 1 oz., water, sufficient to make 8 oz., boil 1 hour, add soaked isinglass, 1 drachm, lump sugar, 2 oz., white wine, 2 oz.—*Paris Codex.* Vermifuge.

**JELLY, HARTSHORN.**—Hartshorn shavings, 8 oz., rinse them, then boil, in clean water, 3 pints down to 1  $\frac{1}{2}$  pints, strain, and add sugar, 4 oz., the juice of a lemon and the white of an egg, beat up with a little cold water; boil till it will jelly, then add the peel of the lemon, and flavour with spicie, &c. to taste.—*Paris Codex.*

**JELLY, ICELAND MOSS.**—Soaked and washed Iceland moss, 2 oz., water sufficient to make a strong solution; boil 1 hour, strain, add 1 drachm of isinglass, and boil to a proper consistence.—*Paris Codex.* Used in cough and asthma.

**JELLY, IRISH MOSS.**—Irish moss, soaked and washed, is boiled as above, and, after straining, flavoured to taste. Either Irish or Iceland-moss Jellies are improved as cough medicines if boiled with linseed, then flavoured with liquorice, sugar-eandy, and the juice of a lemon.

**JELLY, GELATINE.**—Steep one oz. of gelatine in half-a-pint of cold water for 10 minutes, add as much more water, boiling, and stir until dissolved; then mix in two sliced lemons, with sugar and wine to taste.

**JELLY, ISINGLASS.**—Steep  $\frac{1}{2}$  oz of isinglass in a pint of cold water for a short time; heat it gently till dissolved, strain and flavour it to taste. If wanted clear, add the white of an egg, before removing it from the fire.

**JELLY, RESTORATIVE.**—*Dr. Radcliffe's.* Beat a leg of well-fed pork, and break the bone; simmer gently, in 3 gallons of water, down to one, adding  $\frac{1}{2}$  oz. each of mace and nutmeg. Strain, and when cold remove the fat.

**JELLY, SAGO.**—Soak 1 oz. of sago for an hour in water, then boil in one pint of fresh water, until clear; add wine, sugar, lemon-peel, and spicè, if approved. It may be made in milk, when preferred.

**JELLY, TAPIOCA.**—Wash 1 oz. of tapioca well, then soak in a pint of fresh water 5 or 6 hours; add the peel of a lemon, and set all on to heat. Simmer till clear, add the lemon juice, with wine and sugar to taste.

**JUICE, REFINED.**—Spanish juice, 4 parts, gum Arabic, 1 part; dissolve in water, strain, and evaporate to a suitable consistence to roll into cylindrical pieces. Used to allay coughs.

**KEATING'S COUGH LOZENGES.**—Lactucarium, or extract of lettuce, 2 drachms, ippecacuanha, 1 drachm, squills, 45 grains, extract of liquorice, 2 oz., sugar, 6 oz., mucilage

of tragacanth to mix. Divide into lozenges weighing 20 grains each.

**KERMES, MINERAL.**—Crude antimony, 5 parts, dry carbonate of soda, 3 parts, water, 80 parts, boil together, strain while hot; the mineral separates on cooling, it must then be washed and dried. An orange-red powder; given in doses of  $\frac{1}{2}$  gr. to 4 grs. as a cathartic, diaphoretic, or emetic. Used in foreign practice in the same manner as James's Powder in England.

**KETCHUP.**—A sauce or flavouring, prepared from vinegar and mushrooms, walnuts, &c. The sort usually asked for as Ketchup, is the mushroom ketchup, but there are several varieties.

**KETCHUP, CAMP.**—1. Anchovies, 4 oz., mix with beer, 2 quarts, white wine, 1 quart, boil a short time, add peeled shalots, 3 oz., black pepper, mace, nutmegs, and ginger, of each,  $\frac{1}{2}$  oz.; macerate for 14 days, and bottle.

2. Vinegar, 2 pints, walnut ketchup, 1 pint, mushroom-ketchup, 3 oz., garlic, 4 cloves, Cayenne pods,  $\frac{1}{2}$  oz., soy, 2 oz., wine, 4 oz., 3 anchovies, 1 oz. salt. Macerate together 3 weeks, and bottle.

3. Vinegar, 1 pint, walnut-ketchup, 4 oz., soy, 2 oz., 12 chopped anchovies, 2 cloves of garlic, and Cayenne pods, 1 drachm; macerate three weeks, and bottle.

**KETCHUP, CUCUMBER.**—Proceed with ripe cucumbers as for mushroom ketchup. Used with melted-butter, for fowls.

**KETCHUP, COCKLE.**—Scald cockles in their own liquor, add a little water, strain, and season to taste. If the ketchup is wanted white, use sherry wine, a sliced lemon, mace, nutmeg, and white pepper. If required brown, colour with burnt sugar, and use some port wine, anchovies, and garlic. Used to fish.

**KETCHUP, MARINE.**—Strong beer, 4 pints, anchovies,  $\frac{3}{4}$  lb., peeled shalots,  $\frac{1}{2}$  lb., mace, cloves, and mustard seed, of each  $\frac{1}{2}$  oz., ginger and pepper, of each 1 drachm, mushroom-ketchup and vinegar, of each 1 pint; heat till almost boiling; macerate 14 days, and bottle. Used for sea stores; keeps well.

KETCHUP, MUSHROOM.—1. Pickled mushrooms, 4 lbs., salt, 2 lbs., sprinkle it on the mushrooms, and when they liquefy, remove the juice, add pimento, 6 oz., cloves, 1 oz., boil gently, and strain. The remaining liquor, if any, may be treated with pepper, mace, and ginger, for a second quality.

2. Express the mushrooms in the tincture press, and to each gallon add salt, 8 oz., shalots, 1½ oz., pimento, 1 oz., black pepper and ginger, of each ½ oz., and cloves, 1 drachm.

Mushroom-ketchup is apt to lose strength, and turn bad, in a few weeks after it is first made; but again boiling with a little fresh spice at the end of two months, will make it keep good a year round.

KETCHUP, OYSTER.—Mix together wine or good ale, 1 pint, salt, 1 oz., mace and black pepper, of each 1½ drachm, cover oysters with this pickle, boil ten minutes, and when cool, bottle, adding a little brandy to each bottle.

KETCHUP, TOMATO.—Proceed as for mushroom-ketchup, and add a little Chili pepper vinegar.

KETCHUP, WALNUT.—1. The juice of green tender walnuts expressed, 1 gallon, boil and skim till clear, add 2 lbs. of anchovies, shalots, 2 lbs., pepper, mace, and cloves, of each 1 oz., and a sliced clove of garlic. Simmer 15 minutes, add salt to taste, strain, and when cool, bottle. Let it stand 12 months before using.

2. Tender walnuts bruised, ½ bushel; add, to each gallon of juice, red wine, 1 quart, anchovies and bay salt, of each 4 oz., allspice, 1 oz., black pepper, 2 oz., cloves and mace, of each 2 drachms, a little ginger, and sliced horseradish. Simmer slowly until enough, and when cold, bottle.

3. Green walnut shells bruised, 4 parts, salt, 1 part, mix, and in 7 days express the liquor. To each gallon, add allspice, 4 oz., ginger, 3 oz., long pepper, 2 oz., cloves and mace, of each 1 oz. Simmer for 30 minutes, cool, and bottle.

KILOGRAMME.—About 2 lbs. avoirdupois.

**KING'S YELLOW.**—Prepared artificially, by fusing arsenic with an excess of sulphur. The product is a brilliant yellow powder, which is soluble in the alkalies. Used as a pigment, a dye, and in some depilatories. It is *poisonous*, and therefore in many cases abandoned for chrome yellow, in painting.

**LABELS ON TIN** are fixed by French polish, a solution of shellac in naphtha.

**LAC.**—Seed lac and shellac are used in cements, varnishes, lacquers, polishes, sealing-wax, &c. When wanted very pale, shellac undergoes the operation of bleaching, which may be performed in two or three ways.

*Lac, to Bleach.*—1. Spirit, 1 pint, shellac in coarse powder, 6 oz.; dissolve by a gentle heat. To a solution of pure carbonate of potash, add chlorine till the silica precipitates, and the solution becomes slightly coloured. Dilute muriatic acid with three its weight of water; drop into it powdered red lead as long as the lead loses its colour. Of the alkaline solution, add 1 or 2 oz. to the tincture of lac; effervescence takes place, and when this ceases more is added until the mixture is pale. The acid liquor is then added by degrees, letting the effervescence from each portion subside before adding more; enough is dropped in to precipitate the lac, which must be repeatedly washed with clean water, and dried by wringing in a cloth.—*Field*.

2. Spirit, 2 pints, shellac, 5 oz., dissolve, add 10 oz. of new animal charcoal, and boil a few minutes. If not colourless, the boiling must be continued with more charcoal; when quite pale, press through silk, and afterwards filter through blotting paper.—*Luning*.

3. Pearl ash and shellac, of each 1 part, water, 8 parts, boil till dissolved; pass chlorine into the solution until the lac is precipitated; it must then be washed and dried.—*Hare*.

4. Dissolve as last, add a filtered solution of chloride of lime, and, when pale, precipitate with muriatic acid; wash and dry the precipitate.

*Lac, Solution of.*—1. Dissolve shellac in rectified spirit, or in wood naphtha.

2. Lac, 5 parts, borax, 1 part, water, 20 parts; simmer till dissolved, and strain. With Indian ink this forms a good label ink for bottles.

**LACQUER.**—A solution of shellac, coloured to suit the article for which it is intended. French polish is a lacquer for wood. Other lacquers are made for metal.

1. *For Brass.*—Pale lac, 8 oz., spirit, 1 gallon, digest without heat until dissolved, and then filter, into an opaque bottle.

If required yellow, use turmeric, aloes, saffron, or gamboge, to colour. For red, use annatto or dragon's blood. Solutions of these in spirit are kept ready to colour the lacquers as required; turmeric, gamboge, and dragon's blood, generally afford a sufficient range of colours.

2. *Gold-coloured Lacquer.*—Shellac and turmeric, of each 8 oz., sandarae and annatto, of each 2 oz., dragon's blood,  $\frac{1}{4}$  oz., spirit, 1 gallon.
3. Shellac, 4 oz., gamboge,  $\frac{1}{4}$  oz., pyro-acetic ether, 24 oz.; mix, and dissolve. Decant the clear, and for use, mix with 8 times the quantity of spirit.—*Ross.* This mode is adopted to take up the resinous parts only.

**LACQUER FOR BRASS.**—Shellac, gamboge, dragon's blood, each 4 parts, saffron, 1 part, rectified spirit, 25 parts. Digest with heat, and strain.

**LAGENA.**—A stone, or other phial.

**LANGUNCULA.**—A little bottle.

**LAKE BLUE.**—A mixed solution of pearl ash and prussiate of potash is precipitated with a solution of sulphate of iron, 1 part, and alum, 8 parts. The product is blue lake, or Saxon blue.

**LAKE DROP.**—1. Brazil wood, 4 oz., water, 1 gallon, boil, add alum, 6 oz., strain, add solution of tin, 2 oz., and precipitate with liquor of potash, avoiding any excess of alkali.

2. To a strong decoction of Brazil wood, add washed and recently precipitated alumina.

**LAKE, MADDER.**—Madder, 2 oz., tie it in a cloth, beat it in

one pint of water, in an earthen mortar, and repeat the process with about 5 pints of water, until the madder ceases to yield colour. Boil the mixed solutions in an earthen vessel, add 1 oz. of alum dissolved in a pint of boiling water, stir, and add 1½ oz. of saturated solution of carbonate of potash. When cold, pour off the liquor, agitate the powder in 1 quart of boiling water, drain, and dry. *Sir H. C. Inglefield* was rewarded for this formula with the gold medal of the Society of Arts.

**LAKE, RED.**—Cochineal in coarse powder, 1 part, distilled water, and reetified spirit, of each 2 parts, digest 7 days, and add every 2 hours a few drops of solution of tin, until the whole is preecipitated, wash in distilled water, and dry.

**LAPIS DIVINUS.**—1. Alum, verdigris, and nitre, equal parts; melt together.—*Beer*.

2. Alum, nitre, and sulphate of copper, of each 1 oz., eamphor, 1 drachm; melt together.—*Paris Codex*. Used 1 oz. to 1 pint of water, for an eye-water.

**LAPIS INFERNALIS ALKALINUS.**—Hydrate of potash.

**LARD, PURIFIED.**—Lard, 28 lbs., melt it by a steam bath; add alum, 1 oz., table salt, 2 oz., skim off all impurities, and when cold the lard must be ground on a painter's slab, and washed with clean water. It is finally remelted, and is then pure and inodorous. Used by perfumers.

**LAVENDER, BRITISH, (Smith's.)**—English oil of lavender, 1 oz., essenee of ambergris, ½ oz., eau de Cologne, 10 oz., reetified spirit, 1 pint; mix.

**LAVENDER WATER.**—Oil of lavender, 4 oz., rose water, 5 oz., spirit, 30 oz. Mix, and filter.

**LEAD.**—A bluish white metal; sp. gr. 11·45; melts at 600°, but then rapidly oxides. Nitrie and aeetic acids act on lead more than the other acids, and with them it forms various salts. Its equivalent is 103·7; its symbol Pb. (Plumbum.) In the arts lead is much used for eisterns, roofs, pipes, &c., &c. Its alloys are also in great demand. With antimony it forms the alloy used for printing-types and stereotype plates; with tin it makes

organ-pipe metal and solders; with other metals it forms brounce; and in globes it forms gun-shot. It is not used in its pure state as a medicine.

*Lead, Acetate of.*—No formula given in the P. L. for its preparation. The P. E. orders it to be prepared thus: Litharge, 14 oz., pyroligneous acid (sp. gr. 1.034,) 2 pints, distilled water, 1 pint. Mix the acid and water, add the litharge, dissolve with a gentle heat, filter, and concentrate until it crystallizes on cooling.

*Characters and Tests, L.*—Soluble in water (acidulated with acetie acid, *E.*) By carbonate of soda a white precipitate is thrown down, by iodide of potassium a yellow one, by hydro-sulphuric acid it is blackened. Sulphuric acid added to it, evolves acetous odours. If 100 grains are dissolved in water, and sulphate of soda is added, 80 grains of sulphate of lead are preeipitated.

Astringent; used in diarrhoea, dysentery, and menorrhagia, in doses of 1 to 3 grains, generally combined in pill with opium. Externally, it is sometimes used in solution as a cooling astringent lotion.

*Lead, Iodide of, L.*—Acetate of lead, 8 oz., iodide of potassium, 7 oz., distilled water, 1 gallon. Dissolve the acetate in 6 pints of water, and strain; add the iodide, first dissolved in 2 pints of water. Wash the precipitate with cold distilled water, dry and preserve in a dark vessel.

*Characters and Tests, L.*—Yellowish powder, soluble in boiling water, and deposits shining yellow scales on cooling. Melts by heat, and is mostly dissipated, first in yellow, then in violet vapours. If 100 grains are dissolved by heat in nitrie acid, diluted with twice its weight of water, and after the iodine is expelled, sulphate of soda be added, 66 grains of sulphate of lead are thrown down. Light should be excluded from this salt.

Used as other compounds of iodine. Internally in doses of 3 or 4 grains, and externally as an ointment.

*Lead, Oxide of, L.*—Used to make some plasters in the Pharmacopoeia. Not used internally.

*Characters and Tests, L.*—Almost or entirely soluble in dilute nitrie acid; this solution turns black on adding hy-

drosulphuric acid. Potash throws down a white precipitate, and in excess re-dissolves it. If 100 grains of this oxide are dissolved in dilute nitric acid, 135 grains of sulphate of lead are precipitated, on the addition of sulphate of soda.

**LEATHER, TO FASTEN ON METAL.**—Steep the leather in a hot infusion of gall-nuts, wash the metal with a hot solution of gelatine. Press the leather on the metal, and allow it to cool, when it will be firmly fixed.

**LEATHER, WATER-PROOF (COMPOSITION FOR.)**—Mutton or beef tallow, 32 parts, linseed oil, 32 parts, bees'-wax, 24 parts, neat'sfoot oil, 6 parts, lamp-black, 4 parts, litharge or red-lead, 2 parts. The whole to be mixed by heat.

**LEECHES (*Hirudines.*)**—Leeches are best preserved in clean rain or pond water; in spring water they soon die. The water should not be changed too often; once-a-week in summer, and once-a-month in winter, being sufficient, unless it becomes foul. Leeches, when applied, do not probe the skin like a lancet-point, but act by a saw-like motion until the skin is pierced, they then suck, if undisturbed, until the cæcal pouches are full, and finally drop off. A little salt is usually sprinkled on to cause them to disgorge the blood, and they are gently pressed between the fingers, from the tail to the head, to facilitate this effect. When leeches do not readily bite, means are used to induce them. The skin in all cases should be well washed and dried, and the leech gently dried in a soft cloth; it may then be put in a pill-box or wine-glass, which is pressed on the part to be operated on. When they do not yet bite, a small puncture should be made with a lancet, to draw blood, and they will then mostly take hold. This mode is also used when the spot to be drawn from is near the eye, &c., or, if the leech is lively, it may be put in a large quill, and the head placed towards the part, while the thumb prevents its retreat at the opposite end. As the amount of blood drawn by leeches is not large, hot poultices or fomentations are applied to increase the discharge, or the cup-

ping-glasses may be used. When sufficient is drawn, the bites mostly close without much attention, but in some cases they are very troublesome; they should then be pressed with lint soaked in a solution of alum or the tincture of sesquichloride of iron, or a fine point of nitrate of silver should be inserted a minute distance. If the bleeding still continues, the skin must have a needle pressed through the edges, and silk twisted round it.

**LEMON JUICE**, (*factitious*.)—1. Citric acid,  $2\frac{1}{4}$  oz., gum,  $\frac{1}{2}$  oz., lemon-peel,  $\frac{3}{4}$  oz., lump sugar, 2 oz., boiling water, 1 quart; macerate till cold, and strain. Quality superior.  
 2. Citric acid,  $8\frac{1}{2}$  drachms, water, 16 oz., essence of lemon to flavour, 20 drops, sugar, 1 oz.

**LEMONADE**.—1. Slice 2 lemons, pour on 1 pint of boiling water, and add 2 oz. of loaf sugar.  
 2. Fresh lemon juice, 4 oz., lemon-peel,  $\frac{1}{2}$  oz., white sugar, 4 oz., boiling water, 3 pints; cool and strain.—*Brande*.  
 3. *Concentrated*.—Lemon juice, 8 oz., lump sugar, 15 oz.; dissolve; add of tincture of lemon-peel sufficient to flavour it. For use mix with water, with or without a little syrup of ginger.  
 4. *Aerated*.—Water, charged with 5 times its volume of carbonic acid gas, 1 pint, syrup of lemons, 2 oz.—*Paris Codex*.

**Lemonade Powders**.—1. White sugar, 36 drachms, carbonate of soda, 4 drachms, essence of lemon, 15 drops; divide into 12 *blue* papers. In 12 *white* papers divide 6 drachms of tartaric acid. Mix the first well in water, and add the last. Each powder contains 3 drachms of sugar, 20 grains of soda, 2 drops of essence of lemon, and 30 grains of acid. Pleasant refrigerant drink.  
 2. *In one paper*.—Dried citric or tartaric acid, 25 grains, dried carbonate of soda, 20 grains, sugar dried, 2 dr.; mix in fine powder, and add essence of lemon, 1 drop. The first form is the best.

**LILY OF THE VALLEY**.—Extract of orange-flowers, 2 oz., of vanilla, 3 oz., of jasmine, 1 oz., of rose and of cassia, of each 5 oz., of tuberose, 10 oz., essential oil of almonds, 3 drops. A good perfume.

## LIMATURA MARTIS PREPARATA.—Iron filings.

**LIME.**—No directions are given in the P. L., but the P. E. directs to “Heat white marble, broken into small fragments, in a covered crucible, at a full red-heat for 3 hours.” It is caustic when applied to the skin, and is used internally mixed with water, then called lime-water. When first treated with water it swells out, then becomes very hot, and at last falls into powder, the hydrate of lime, or slaked lime. It has the remarkable property of being more soluble in cold than in hot water; freezing water will dissolve about twice as much as boiling water.

*Characters and Tests, L.*—Water being added, it crumbles into powder. It is dissolved without effervescence by dilute hydrochloric acid, and nothing is precipitable on the addition of ammonia in excess.

*Lime, Chlorinated.*—Prepared on the large scale only. The usual process is to expose lime (recently slaked) to the vapours of chlorine in close chambers, the gas is absorbed in large quantities by the lime; and forms chlorinated lime; four or five days are requisite to complete the combination. It is a powerful bleacher, and is popularly used as a disinfectant. “It is dissolved in dilute hydrochloric acid, emitting chlorine.”

**LINEN**, when woven with cotton, may be tested as follows: Immerse a slip of cloth in boiling hydrate of potash and water, equal parts, in 3 minutes remove the slip, and dry it between blotting papers. The cotton threads, if pulled asunder, will show a *white* or *bright yellow* colour, the linen a *dark* yellow. In using the alkali, a glass, porcelain, or silver vessel must be employed.—*Dr. Boettger.*

**LINIMENT.**—A fluid external application, generally applied with the hand, using continuous moderate friction.

*Of Ammonia, L.*—Solution of ammonia, 1 oz., olive oil, 2 oz.; shake until mixed. A stimulant application to swellings or bruises, and may be rendered anodyne by adding a little extract of belladonna.

*Of Camphor, L.*—Camphor, 1 oz., olive oil, 4 fluid oz.;

dissolve by trituration. A stimulant application in sprains, bruises, or rheumatism.

*Of Camphor, — Compound, L.*—Camphor, 2½ oz., stronger ammonia, 3 oz., rectified spirit, 17 oz., oil of lavender, 1 drachm; dissolve the camphor in the spirit, add the oil and the ammonia, shake until mixed. More powerful than the simple liniment, and is sometimes used with an addition of ¼th of tincture of opium.

*Of Lime, L.*—Lime-water and olive oil, of each 10 oz.; shake until mixed. Generally employed to relieve the pain of a burn or seald.

*Of Mercury, L.*—Ointment of mercury and lard, of each 4 oz., camphor, 1 oz., rectified spirit, 1 drachm, solution of ammonia, 4 oz.; rub together the camphor and spirit, then triturate with the lard, the ointment, and the ammonia, added separately. One drachm contains 10 grs. of mercury. Used to stimulate chronic venereal pains, and various obstinate swellings.

*Of Opium, L.*—Tincture of opium, 2 oz., liniment of soap, 6 oz.; mix. Used as a sedative externally, when opium cannot be taken internally; it is often mixed with the compound liniment of camphor.

*Of Sesquicarbonate of Ammonia, L.*—Solution of sesquicarbonate of ammonia, 1 oz., olive oil, 3 oz.; mix, with agitation. Less powerful than the liniment of ammonia, but employed in similar eases.

*Of Soap, L.*—Soap, 2½ oz., camphor, 10 drachms, spirit of rosemary, 18 oz., distilled water, 2 oz.; mix the water and spirit, add the soap and camphor, and macerate until dissolved. Less powerful than the compound eamphor liniment, but similarly employed.

*Of Turpentine, L.*—Soft soap, 2 oz., camphor, 1 oz., oil of turpentine, 16 oz.; mix. Stimulating application, applied to burns, &c.

**LINIMENT, WHITE.**—Oil of turpentine, 2 oz., ammonia, 2 oz., soap liniment, 3 oz., spirit of rosemary, 1 oz., vinegar, 8 oz. Mix.

*Of Verdigris, L.*—Powdcred verdigris, 1 oz., vinegar, 7 oz., honey, 14 oz.; dissolve the verdigris in the vinegar,

strain through linen, add the honey, and evaporate to the required consistence. Stimulant to indolent venereal, and other ulcers.

**LIP SALVE, WHITE.**—Almond oil, 4 oz., wax and spermaceti, of each 1 oz., otto of roses, 20 drops.

*Rose.*—The above, coloured with alkanet root.

**LIQUID SOAP.**—Soft soap, 1 lb. rectified spirit, 25 oz ; mix. Used in shaving, and may be scented as desired.

**LIQUID BLISTER.**—Powdered cantharides, 5 oz., sulphuric ether, 15 oz. Mix.

**LIQUORS, OR COLD INFUSIONS.**—Macerate the substance, coarsely bruised or powdered, in twice its weight of cold distilled water; at the end of six hours strain, and add fresh water equal in amount to the first product. Continue this process until the active principle appears to be exhausted. Evaporate the cold infusion, at a temperature not exceeding  $160^{\circ}$ , to the specific gravity of  $1,200^{\circ}$ , and add as much rectified spirit as will reduce the specific gravity to  $1,100$ .—*Battley*.

**LISBON DIET DRINK.**—A preparation of sarsaparilla became celebrated under this title. It is no longer used, the compound decoction of sarsaparilla being always substituted.

**LITHOGRAPHY.**—The practice of engraving on stone. The artist may draw on the stone direct, or on transfer-paper, which is then pressed forcibly on the stone and leaves a reverse impression. When the drawing is made, a weak solution of hydrochloric or sulphuric acid is poured upon the stone, and by abstracting the alkali from the ink, leaves it permanently fixed on the stone. This operation is termed *etching in*, and is performed with one part of acid in 100 parts of water; the stone is next washed with water, and weak gum-water is poured on it to fill up the pores, so that the drawing shall not spread. When all is ready a wet cloth is passed over the whole, the water immediately leaves the greasy lines, but remains on the stone, and the ink roller is passed over it. The ink adheres to the drawing, but leaves the stone

untouched, and when one impression has been taken, the stone is again wetted and rolled for the succeeding one. See *Ink*, and *Crayons*, Lithographic.

*Transfer-paper* is prepared thus: Make a mucilage with  $\frac{1}{2}$  oz. of gum tragacanth, strain, add 1 oz. of glue, and  $\frac{1}{2}$  oz. of gamboge. Mix French chalk, 4 oz., old Paris plaster,  $\frac{1}{2}$  oz., starch, 1 oz.; run them through a sieve, grind with the mixed mucilage, add water to reduce to the consistency of oil, and apply it with a brush to thin sized paper. The drawing made on this prepared side of the paper is wetted at the back and placed on the stone, which is warmed to  $125^{\circ}$  F., the whole is then strongly pressed in the lithographic press, and the stone receives the impression, which may be printed from as usual. When two impressions are required, a red composition is made of wax, 2 parts, soap, 1 part, and vermillion to colour, all melted in a saucepan, and ground with water to the consistency of cream. This is spread thinly on the second stone, an impression from the first stone is next applied, and the second drawing is thus made to correspond with the first exactly. If, in printing, the drawing becomes smutty, mix equal parts of water, olive oil, and oil of turpentine, shake till they froth, wet the stone, throw this froth on it, and rub it with a soft sponge. The printing ink will be dissolved, and the drawing will almost disappear, but, on rolling it, it reappears as clear as at first. When the stone is laid by for future use, a *preserving ink* is applied, to prevent the surface printing ink becoming too hard. Thick varnish of linseed oil, 2 parts, tallow, 4 parts, wax and Venetian turpentine, of each 1 part; melt; add, by degrees, lamp-black, 4 parts, mix thoroughly, and preserve in a tin case. This must be rolled on the stone each time before laying it aside for future use. When the whole of the impressions are completed, and the stones required for other drawings, two of the stones are laid face to face and ground with sand and water until the surfaces are clear. They are finally, more or less, polished with pumice stone, according to the required fineness, and are then prepared to receive other drawings.—*Fielding*.

The ink used to write on the transfer-paper is called *auto-graphic* ink, and from another source the following recipe is given: White wax, 8 parts, white soap, 2 to 3 parts; melt gradually; add lamp-black, 1 part, mix, add shellac, 2 parts, and, when well combined, mould to the crayon form. *Transfer-paper* is also made by coating paper with 3 coats of thin size, 1 of starch, and 1 of gamboge, letting it dry between each, but the form above is preferable, and far less troublesome. Another recipe for preparing transfer-paper orders alum, whereas Fielding remarks, on the quality of the printing papers, "Chinese papers have sometimes a strong taste of alum, this is so fatal as sometimes to spoil the drawing after the *first* impression,"—its omission would, therefore, appear important. "Paper made from rags which have been bleached with oxymuriatic acid, will irremediably destroy the drawing after thirty impressions." By means of this branch of printing, drawings, maps, circulars, almanacs, &c., are now daily distributed at cheap rates, and beautifully executed, while the art is so easily acquired, that, for the purpose of correspondence, &c., it is used to save time in some large offices. Its main features may be best comprehended by viewing a lithographic office, or by visiting any of the exhibitions which have been opened of late in Mechanics' Institutes and elsewhere, to afford instruction in the arts and sciences.

**LOCOCK'S PULMONIC WAFERS.**—Lump-sugar and starch, of each 2 parts, gum 10 parts, squills and ipeecuanha, of each 5 parts, lactucarium, 2 parts. Mix, and divide into 8 grain lozenges.

**LOZENGE.**—A solid form of medicine or confection, intended to dissolve gradually in the mouth. The mucilage of tragacanth, or acacia and the white of egg are usually employed to give consistence to the mass, and when the whole is a uniform stiff paste, it is rolled to the proper thickness and punched out to shape. They are then dried on inverted sieves in a warm temperature; starch or other powder is used to prevent their adhering to-

gether, and dust is carefully excluded. The lozenges must be turned daily, until they become sufficiently hard. The mass of this class of drugs are prepared by the confectioner; no directions are, therefore, given in the P. L. for any lozenges, but the P. E. has retained the forms of a few which are in general use.

*Lozenges, Acacia, E.*—Gum Arabic, 4 oz., starch, 1 oz., pure sugar, 1 lb. Mix the powdered ingredients, and make a lozenge mass with rose-water. Used at pleasure as a demulcent in coughs.

*Lozenges, Chalk, E.*—Prepared chalk, 4 oz., gum Arabic, 1 oz., nutmeg, 1 drachm, pure sugar, 6 oz.; mix the powder with water. Used at pleasure as an astringent in chronic diarrhoea.

*Lozenges, Lactucarium, E.*—Prepared as opium lozenges, but using lactucarium instead of opium. Used as a sedative in irritable coughs; they do not excite headache or constipation so readily as the lozenges of opium. Each lozenge contains about one-seventh of a grain of lactucarium; they may be taken at pleasure.

*Lozenges, Liquorice, E.*—Extract of liquorice and gum Arabic, of each 6 oz., pure sugar, 1 lb; dissolve them in a sufficiency of boiling water, then concentrate the solution over a vapour bath to the proper consistence. Used at pleasure as a demulcent in coughs.

*Lozenges, Magnesia, E.*—Carbonate of Magnesia, 6 oz., pure sugar, 3 oz., nutmeg, 1 scruple. Mix the powders to a suitable mass with mucilage of tragacanth. Used as an antacid and laxative; each lozenge contains about 8 to 10 grains of magnesia.

*Lozenges, Morphia, E.*—Muriate of morphia, 1 scruple, tincture of tolu,  $\frac{1}{2}$  oz., pure sugar, 25 oz. Mix the morphia in a little hot water, then combine the whole with sufficient mucilage to make lozenges, each of which should weigh about 15 grains. Used as a sedative; each grain contains about one-fortieth of a grain of muriate of morphia.

*Lozenges, Morphia and Ipecacuanha, E.*—Muriate of morphia, 1 scruple, ipecacuanha, 1 drachm, tincture of tolu,  $\frac{1}{2}$  oz., pure sugar, 25 oz. Proceed as for morphia

lozenges. Used for coughs; if taken in excess they excite nausea. Each lozenge contains about one-fortieth of a grain of muriate of morphia, and one-twelfth of a grain of ipecacuanha. 3 or 4 may be taken daily.

*Lozenges, Opium, E.*—Opium, 2 drachms, tincture of tolu,  $\frac{1}{2}$  oz., pure sugar, 6 oz., gum acacia and extract of liquorice, of each 5 oz. Reduce the opium to a fluid extract, mix it with the liquorice previously reduced to the consistence of treacle, sprinkle the gum and sugar into the mass, and when of a proper consistence divide into 10 grain lozenges. Each lozenge contains about one-seventh of a grain of opium. Several may be taken in the day to relieve coughs.

*Lozenges, Soda, E.*—Bicarbonate of soda, 1 drachm, pure sugar, 3 oz., gum Arabic,  $\frac{1}{2}$  oz. Mix the powders with mucilage. Use as an antacid in heartburn, &c.

*Lozenges, Tartaric Acid, E.*—Tartaric acid, 2 drachms, pure sugar, 8 oz., volatile oil of lemons, 10 drops. Powder the sugar and acid, add the oil, and mix to a mass with mucilage. Used at pleasure; refrigerant in feverish attacks. These lozenges resemble acid-drops, and they are often used to cut the phlegm in tickling coughs.

Though the P. L. has omitted to notice this form of preparing medicine, yet as opium, morphia, and other powerful drugs are made up in this manner, it would be much more satisfactory to have some fixed standard of strength, instead of the varieties which are met with in the trade. Some lozenges of opium have  $\frac{1}{8}$ , others  $\frac{1}{4}$  to  $\frac{1}{2}$  of a grain in each; the morphia lozenges contain one-fortieth to one-twenty-fourth of a grain of morphia, and other kinds vary even more than these. In default of any fixed standard, all the opium or morphia lozenges should be stamped one-seventh, one-twenty-fourth, &c., to indicate the strength at which the maker prepares them, being so much of a grain in each. Lozenges are sometimes made up according to private prescription; in such cases the druggist can have any medicine prepared into lozenges, by sending it to the confectioner with proper instructions as to the quantity to be allowed

in each. This ensures their being neatly and correctly made up, while the active ingredients are known to the proprietor only.

*Lozenges, Aniseed.*—Powdered sugar, 3 lbs., umber, 3 drachms, oil of aniseed, 50 drops, mucilage, q. s.

*Black Currant.*—Sugar, 3 lbs., extract of black currants, 3 lbs., tartaric acid, 1 oz., powdered gum, 6 oz.

*Camphor.*—Sugar, 3 lbs., small blue,  $\frac{1}{2}$  drachm, camphor, 1 oz. Dissolved in spirit, q. s., and mucilage to mix.

*Cinnamon.*—Sugar, 4 lbs., drop lake, 12 grains, gamboge, 2 scruples, oil of cassia, 1 drachm, mucilage to mix.

*Chalk.*—Sugar, 1 lb., prepared chalk, 2 oz., mucilage to mix.

*Cough.*—Liquorice juice, 1 lb., sugar,  $4\frac{1}{2}$  lbs., liquorice powder,  $1\frac{1}{2}$  oz., tragacanth powder,  $1\frac{1}{2}$  oz., starch powder,  $1\frac{1}{2}$  oz., gum Arabic,  $2\frac{1}{2}$  oz., oil of aniseed, 75 drops.

*Ginger.*—Sugar, 7 lbs., ginger, 12 oz., mucilage to mix.

*Ipecacuanha.*—Sugar, 4 lbs., ipec. powder, 1 oz., otto of roses, 4 drops, mucilage to mix.

*Ipec. with Tolu.*—Add to the last tincture of tolu,  $\frac{1}{2}$  oz., cream of tartar, 2 oz.

*Lavender.*—Sugar, 3 lbs., English oil of lavender, 1 drachm, drop lake, 20 grains, mucilage q. s.

*Peppermint.*—Sugar, 12 lbs., smalts, 2 scruples, English oil of peppermint, 1 oz., mucilage to mix.

*Magnesia.*—Sugar, 8 lbs., smalts,  $\frac{1}{2}$  drachm, heavy magnesia, 8 oz., precipitated chalk, 8 oz., oil of nutmeg, 20 drops, mucilage to mix.

*Nitre.*—Sugar, 3 lbs., nitre, 1 lb., smalts,  $\frac{1}{2}$  drachm, mucilage to mix.

*Opium.*—Sugar, 4 lbs., powdered opium, 2 drachms, mucilage to mix.

*Paregoric.*—Sugar, 8 lbs., drop lake, 1 drachm, paregoric, 1 oz., tartaric acid,  $\frac{1}{2}$  oz. Mix with mucilage.

*Pectoral.*—Opium, 6 grains, camphor, 20 grains, sugar, 3 drachms. Mix with mucilage of tragacanth, and make 48 lozenges. Four to six may be used daily.

*Rose.—Red.*—Sugar, 8 lbs., drop lake, 1 drachm, tartaric acid,  $\frac{3}{4}$  oz., otto of roses, 4 drops. Mix with mucilage.

*Lozenges, Acid.*—Sugar, 8 lbs., tartaric acid,  $\frac{1}{2}$  oz., otto of roses, 8 drops, smalts, 1 drachm, mucilage q. s.

**LUTE.**—A protection to the joints of chemical vessels, steam-pipes, &c. When the heat does not exceed  $212^{\circ}$ , linseed meal made into a paste with water serves as a lute, or plaster-of-paris made into a paste, and, after applying, rubbed over with wax and oil, will bear almost a red heat. Fire-clay and brick-dust made into a paste with a solution of borax, will serve to join pipes exposed to a great heat. For coating retorts the electrotype process is now successfully resorted to; formerly they were covered with a paste of pipe-clay, horse-dung, and water. The copper covering is, however, permanent, and better adapted to equalize the heat. “For joining many pipes, small tubes of India-rubber are *inexpressibly* useful.”—*Fownes*.

**MACARONI** resembles vermicelli, except in size. It is an article of sale with some druggists, and is used in various dishes. Two or three preparations are given below.

1. Boil macaroni in salt and water until soft, pour away the liquor, and add to the macaroni—butter, cream, a little grated cheese, and if preferred a little spice also. Toast in a Dutch-oven until brown.
2. Instead of using water, boil it first in milk or weak veal broth.
3. *Pudding.*—Simmer 2 oz. of macaroni in milk till tender, adding a little cinnamon and lemon-peel, then put it in a dish, with one egg and sufficient sugar and nutmeg to taste, and bake.

**MACERATION.**—The infusion of any substance in a liquid for the purpose of extracting the soluble portion. Chiefly applied to the preparation of tinctures and infusions in Chemistry and Pharmacy.

**MAGISTERE DE SOUFRE.**—Precipitated sulphur.

**MAGNESIA, L.**—Carbonate of magnesia, 1 lb.; burn it in a very strong fire for two hours.

**Characters and Tests, L.**—When moistened with water it

slightly changes the colour of turmeric to brown. It is soluble in hydrochloric acid without effervescence, and nothing is then precipitated on the addition of bi-carbonate of potash, or chloride of barium.

Tasteless, scentless, light white powder; sp. gr. 2·3; forms salts with the acids. It forms a solid mass with balsam of copaiba, and becomes almost solid if mixed with the solution of sulphate of magnesia and any tincture containing mucilaginous ingredients, as tincture of colchicum, &c. Used as an antacid and laxative, but its use must not be too long continued, as it concretes in the bowels. Dose: 15 to 30 grains.

*Magnesia, Carbonate of, L.*—Sulphate of magnesia, 4 lbs., carbonate of soda, 4 lb. 9 oz., boiling distilled water, 4 gallons. See *Carbonate of Magnesia*.

*Magnesia, Sulphate of, L.*—Does not deliquesce in the air, dissolves in water; if sulphuric acid is dropped into this solution, no hydrochloric acid is evolved. This is the common Epsom salts; they resemble oxalic acid in the appearance of the crystals, but are distinguished by the taste, and by bicarbonate of soda dissolving in the acid with effervescence, while it has no effect on the true Epsom salt.

**MAGNESIAN EFFERVESCENT APERIENT.**—Sulphate of magnesia, 12 oz., tartaric acid, 8 oz., calcined magnesia, 3 oz., pure sugar, 18 oz., bicarbonate of soda, 6 oz., essence of lemon, 30 drops. Dry the powders separately, mix and sieve them, then bottle securely. Two or three teaspoonfuls in water for a dose.

**MAHOGANY, TO IMITATE.**—Use beech, box, or any other close-grained wood; plane it level, and smooth it with fine glass-paper. Then stain it by any of the following modes:—

1. Rub the surface with nitrous acid, and afterwards brush on two or three coats of the following mixture. Dragon's-blood, 4½ oz., soda, 1 oz., rectified spirit, 3 pints; mix and apply. When dull it may be revived by using cold-drawn linseed oil as a polish.

2. Aloes, 2 parts, dragon's-blood, 1 part, spirit, 20 parts; dissolve and apply. Finish with oil and wax, coloured with alkanet.

MALT is generally prepared from barley, which is steeped in water to swell out; when sufficiently swollen it is air-dried, and afterwards stoved at a heat varying from 90° to 165°, according to the required colour. At the lower heat it is pale malt, at a higher heat amber, and afterwards pale brown malt. It is used to prepare various malt liquors, previous to which it is ground and mashed. Grain which is unmalted is sometimes mixed with malt, but if a handful of the mixed grains be thrown into water, the unprepared portion sinks to the bottom, while malt floats, or sinks very slightly.

MANGANESE, BINOXIDE OF, is the most common of the oxides of manganese; it has a black colour, is insoluble in water, and refuses to unite with acids. It is largely used to prepare chlorine, and is introduced into the P. L. for this purpose. *Character*, P. L.—“It is soluble in hydrochloric acid, evolving chlorine.” Heat disengages oxygen; and it is therefore used by the chemists to prepare this gas.

MARBLE is used to prepare carbonic acid, and the lime of the P. E. Marble may be cleaned by using a little ox-gall, with soap-and-water; or if very dirty, spread over it some mixed lime and potash; leave it a day or two, and wash it off.

*Marble, to Stain.*—Heat the marble and the colouring liquid moderately, then apply the solution to the surface. For *blue* use solution of litmus; *green*, wax, coloured with verdigris; *yellow*, tineture of gamboge or turmeric; *red*, tineture of alkanet or dragon's-blood; *crimson*, alkanet in turpentine; *flesh*, wax tinged with alkanet; *brown*, tineture of logwood; *gold*, equal parts of verdigris, sal ammoniae, and sulphate of zinc, in fine powder. Considerable experience is required to produce the best effects.

*Marble, to Imitate.*—Resin, 4 parts, wax, 1 part; melt together; add 6 parts of a hot solution of glue, pow-

dered alum, 4 parts, powdered gypsum, 12 parts. Colour the composition at pleasure, stir in some refuse silk, and pour into moulds.

MEGILP.—Mastic varnish, 1 part, pale drying oil, 2 parts; mix. May be thinned, if required, with turpentine. Used by painters to glaze their pictures.

MELLAGO.—3 parts of an extract with 1 part of water.

MERCURY is the only metal which is fluid at common temperatures. Its sp. gr. is 13.5, but when frozen it becomes 15.5. It freezes at about 40° F., and boils at about 662° F. Its equivalent is 202, its symbol Hg. (hydrargyrum.) It is much used in the arts for silvering looking-glasses, wash gilding, in making thermometers, barometers, compensating pendulums of cloeks, &c., and in medicine its salts are an important class of remedies. In its primitive state it appears to be almost inert.

*Characters, L.*—Sp. gr. 13.5; volatilized by heat. When the globules are gently rolled on a sheet of paper, no partieles adhere to the paper.

It is soluble in nitric acid, and affected by hot sulphuric acid, but not by any others.

*Mercury, Ammonio-Chloride of, L.*—Biehloride of mercury, 6 oz., distilled water, 6 pints, solution of ammonia, 8 oz. Dissolve the biehloride in the water by heat, when cool add the ammonia, frequently shaking it. Wash the precipitate until free from taste, and dry it.

*Characters and Tests, L.*—“A white powder, whieh sublimes by heat, and is soluble in hydroehlorie acid without effervescence. Heated with liquor potassæ, it exhales the ammonia, and turns yellow.” It is the lightest of the mercurial compounds; is insoluble in alcohol, ether, or water, but is soluble in hydroehlorie, sulphuric, and nitric aeids. Calomel turns black with liquor potassæ; this salt turns yellow. Not used internally, but as an ointment externally, in skin diseases.

*Mercury, Bichloride of, L.*—Mereury, 2 lbs., sulphuric acid, 21½ oz., common salt, 1½ lb. Boil down the

mereury with the aeid until dry, hypersulphate of mereury remains; when cold rub it with the chloride in an earthen mortar, then, by a gradually increased heat, sublime.

*Characters and Tests, L.*—Crystalline liquefies by heat, and quickly sublimes; is soluble in water, ether, and rectified spirit. What is precipitated from the watery solution, on the addition of potash, soda, or lime-water, is reddish, or if abundantly added, it is yellow. This last substance, on the application of heat, evolves oxygen, and runs into globules of mereury.

This salt of mereury is soluble in 16 parts of cold water and three parts of boiling; it crystallizes from the hot solution on cooling. Ether withdraws it from an aqueous solution, being a readier solvent than water. The biehloride of mereury is an antiseptic, and is used as such in preserving timber, &c. It is the active ingredient in Gowland's Lotion, and other cosmetics. Internally, in large doses, it is a *powerful poison*; it has a most unpleasant taste on swallowing it, and acts very speedily. In small doses it is used with sarsaparilla, &c., as an alterative in syphilis, but is rarely given if the patient has a cough or pulmonary disease. Externally it has been used as an ointment, but it is not safe, and is seldom used; with liquor potassæ, it forms the *yellow wash* for scrofulous or syphilitic ulcers. Dose: the best form is the officinal solution, beginning with 10 drops, and gradually increasing to 30 or 40 drops; in the solid form it is given one-sixteenth to one-eighth of a grain in pills.

*Mercury, Bisulphuret of, L.*—Mereury, 2 lbs., sulphur, 5 oz. Melt the sulphur over the fire, add the mereury, and as soon as the mass swells, remove the vessel and *cover closely* lest the mixture take fire, then rub the mass to powder and sublime it. *Characters, L.*—Sublimes by heat, but if potash is added it runs into globules of mereury.

This is the brilliant red pigment *Vermilion*. It is not used internally, but sometimes externally its heated vapour is used as a fumigation for ulcerated surfaces.

*Mercury, Chloride of, L.*—Mercury, 4 lbs., sulphuric acid, 21  $\frac{1}{2}$  oz., common salt, 1  $\frac{1}{2}$  lb.; boil 2 lbs. of the mercury in the acid until dry, hypersulphate of mercury remains; when cool, rub this with the remaining mercury in an earthenware mortar, and mix well, add the salt, rub till globules are no longer visible, then sublime. Rub the sublimate to a very fine powder, wash carefully with boiling distilled water, and dry it.

*Characters and Tests, L.*—Whitish powder; sublimes by heat. On adding potash it becomes black; and, if then heated, runs into globules of mercury. No precipitate is thrown down from water in which it has been washed or boiled by nitrate of silver, lime-water, or hydrosulphuric acid.

Purgative, alterative, resolvent. It is sometimes given in large doses, but without increased benefit. The general quantity is 1 to 3 grains, with some aperient, but 6 to 10 grains, and much greater quantities, have been repeatedly administered. On some persons even small doses act with unexpected severity.

*Mercury, Iodide of, L.*—Mercury, 1 oz., iodine, 5 drachms, alcohol, a sufficient quantity. Rub the mercury and iodine together, adding the alcohol gradually until globules are no longer visible. Dry the powder quickly with a gentle heat, without the access of light, and keep it in a black-glass bottle, well stoppered.

*Characters and Tests, L.*—When fresh it is yellowish; when heat is cautiously applied, it sublimes in red crystals, which quickly turn yellow, and, on access of light, blacken. It is not dissolved in a solution of common salt, hot or cold. Used in scrofulous and syphilitic diseases. Dose: 1 to 3 grains in pill, internally; externally, it is applied in the form of ointment.

*Mercury, Nitrico-Oxide of, L.*—Mercury, 3 lbs., nitric acid, 18 oz., distilled water, 2 pints; mix, and apply a gentle heat until the mercury is dissolved, boil down the liquor, and rub what remains to powder, put this into another very shallow vessel, apply a low heat, and gradually raise it until red vapours cease to arise.

*Characters and Tests, L.*—It consists of crystalline shining red scales, it is sublimed at a strong heat without emitting nitrous fumes. It is soluble in hydrochloric and nitric acids. Escharotic. Only used externally, and as an ointment for various skin disorders.

*Mercury, with Chalk, L.*—Mercury, 3 oz., prepared chalk, 5 oz. Triturate until globules are no longer visible.

*Characters, L.*—By heat part passes off in vapour; what remains agrees with Prepared Chalk in its characteristics.

This preparation is almost always made on the large scale, and by steam-power. It is the mildest mercurial compound, and usually given to children as an antacid and alterative. Dose: 2 to 10 grains.

**METAL, TO PRESERVE FROM CORROSION.**—Dip the article in a very dilute solution of nitric acid, and afterwards immerse in linseed oil, allowing it to drain thoroughly.

**MILK** may be preserved by heating it in bottles in a water bath to nearly the boiling point, and immediately corking and wiring it down. With sugar it may be evaporated to a syrup; or, with still more, to a candy. Milk may be evaporated to a thick consistency, if the cream be first removed; and if first sealed, and, when cold, charged with carbonic acid gas, it will be preserved after the manner of Bethel's patent. Moor's preserved milk is in the solid form, and liquefies on the addition of water.

**MILK OF ROSES.**—A cosmetic wash. It usually consists of solutions of soap and alkalies, mixed with perfume, or of metallic preparations, scented.

1. Liquor potassæ, hot water, and oil of almonds, of each 1 part; mix, and add rose-water, 3 parts.
2. Blanched almonds, 4 oz., oil of almonds, Castile soap, and white wax, of each 2 drachms, spermaceti, 1 dr., make an emulsion, with 30 oz. water; strain; add otto of rose, 5 drops, oil of lavender, 15 drops, ambergris, 10 grains, dissolved in 8 oz. rectified spirit.

3. Liquor of acetate of lead, and spirits of lavender, each  $\frac{1}{2}$  oz., rose-water, 3 oz., water, 10 oz.; mix.
4. Tinectures of benzoin and storax, of each  $\frac{1}{2}$  oz., spirit of roses, 1 draehm, reetified spirit, 1 oz., rose-water, 1 pint.

**MILK OF ROSES.**—Melt in a steam bath  $\frac{1}{2}$  oz. of oil soap, sliced into 3 oz. of rose-water; when melted, add spermaceti and white wax, of each  $\frac{1}{2}$  oz. Blanch 8 oz. of almonds, beat them into a paste with 1 quart of rose-water, and strain the emulsion through *washed* muslin. Gradually combine the soap and the emulsion, and finally add, by slow degrees, 5 oz. of alcohol, in which is dissolved 1 draehm of otto of roses. Finally strain.

**MINERAL MARMORATUM, SUCCEDANEUM, &c.,** are compositions for filling decayed teeth.

1. Quicksilver, 40 grains, zinc-filings, 20 grains; mix for use, and, having dried the tooth with a bit of lint, apply the amalgam. The tooth must be first cleaned out, and if the nerve aches, the filling is useless until all pain be relieved. This is sometimes attempted by mixing arsenious acid, 3 parts, with muriate of morphia, 2 parts, and a little creosote, and applying to the tooth; but this is a dangerous compound for such a purpose. The preparations of opium and morphia, camphor, and the essential oils, are safer.
2. See Toothache, and Amalgam for the Teeth.

**MIXTURES** are compound liquid medicines, generally prepared only as required. Heavy powders and incompatible solutions are to be avoided in mixtures.

*Mixture of Acacia, L.*—Powdered acacia, 10 oz., boiling distilled water, 1 pint. Rub the acacia, with the water gradually added, until the gum is dissolved, then strain through flannel. Demuleent. Used medicinally to allay irritation, and chemically to suspend various substances in water. Precipitated.

*Mixture of Almond, L.*—Confection of almond,  $2\frac{1}{2}$  oz., distilled water, 1 pint. Rub the confection, with the water gradually added, and, when mixed, strain through linen. Demuleent. Dose at pleasure.

*Mixture of Ammoniacum, L.*—Prepared ammoniaeum, 5 dr., distilled water, 1 pint. Rub the ammoniaeum with the water, gradually added, until they are mixed. Expectorant. Dose:  $\frac{1}{2}$  to 1 oz.

*Mixture of Camphor, L.*—Camphor,  $\frac{1}{2}$  draehm, rectified spirit, 10 drops, distilled water, 1 pint. Rub the camphor with the spirit, then with the water, gradually added, and strain through linen. Used as a vehicle for mixtures, and in lotions. Dose:  $\frac{1}{2}$  to 2 oz.

*Mixture of Chalk, L.*—Prepared chalk,  $\frac{1}{2}$  oz., sugar, 3 draehms, mixture of acaeia,  $1\frac{1}{2}$  oz., cinnamon-water, 18 oz.; mix. Antaeid. Used with astringents in diarrhoea. Dose:  $\frac{1}{2}$  to  $1\frac{1}{2}$  oz. every 3 or 4 hours.

*Mixture of Gentian, (Compound) L.*—Compound infusion of gentian, 12 oz., compound infusion of senna, 6 oz., compound tineture of cardamoms, 2 oz.; mix. Used in dyspepsia accompanied with constipation. Dose: 1 to 2 oz.

*Mixture of Guaiacum, L.*—Guaiacum resin, powdered, 3 draehms, sugar,  $\frac{1}{2}$  oz., powdered acaeia, 2 drachms, cinnamon-water, 1 pint. Rub the sugar with the guaiacum and acaeia, and gradually add the cinnamon-water. Stimulant, alterative, sudorific. Employed in rheumatism, chronic gout, and in skin diseases. Dose:  $\frac{1}{2}$  to  $1\frac{1}{2}$  oz.

*Mixture of Iron, (Compound) L.*—Powdered myrrh, 2 drachms, carbonate of potash, 1 drachm, rose-water, 18 oz., powdered sulphate of iron,  $2\frac{1}{2}$  scruples, spirit of nutmeg, 1 oz., sugar, 2 drachms. Tonie. Used in chlorosis, amenorrhoea, and phthisis. Dose:  $1\frac{1}{2}$  oz. three times a-day.

*Mixture of Spirit of French Wine, L.*—Brandy and cinnamon-water, of each 4 oz., the yolk of 2 eggs, sugar,  $\frac{1}{2}$  oz., oil of cinnamon, 2 drops; mix. Stimulant, restorative. Used in low fevers, and in cases of exhaustion. Dose:  $\frac{1}{2}$  to 2 oz., repeated as required.

**MODELLING CLAY (SOFT.)**—Clay kneaded with glycerine remains permanently soft.

**MOIREE METALLIQUE** is the term applied to the crystallized appearance of tin, produced by acids. Dip the sheet-

iron in a bath of pure tin, 200 parts, copper, 3 parts, arsenic, 1 part. When tinned the sheet is—1. Immersed in caustic solution of potash, and washed. 2. Immersed in dilute nitro-muriatic acid and washed. 3. As No. 1. 4. Passed rapidly through nitric acid, and washed. 5. As No. 1. 6. As No. 2. 7. As No. 1. The washing at each process should be perfect, and the last should be hot water. Finally varnished with copal varnish.

**MORDANTS** are used in dyeing, to fix the colours which would otherwise be fugitive. The principal mordants are, alumina, iron liquor, and the hydrochlorate of tin.

**MORPHIA** is seldom used in medicine; but its *salts* are much employed. It is officinal in the P. D. only, which orders ammonia-liquor to be added in excess to a solution of hydrochlorate of morphia, the precipitate to be washed with cold distilled water, and dried at a gentle heat.

*Morphia, Acetate of, L.*—No directions are given in the P. L. for this preparation. It may be made from freshly-precipitated morphia being added to acetic acid in excess, and evaporating until the solution will crystallize. The former directions of the P. L. were, morphia, 6 dr., acetic acid, 3 drachms, distilled water, 4 oz.; dissolve the morphia in the mixed fluids, filter, evaporate gently, and crystallize.

*Characters and Tests, L.*—Soluble in water and in rectified spirit, and when the spirituous solution is distilled it yields crystals, which are destroyed by heat. On the addition of nitric acid it becomes first red, and then yellow. Tincture of sesqui-chloride of iron turns it blue. Freshly-prepared chlorine being first added, and afterwards ammonia, a brown colour is produced, which disappears on the addition of more chlorine. Morphia is first precipitated by solution of potash, and then re-dissolved when more is added. Used as the hydrochlorate of morphia. The acetate is more active in causing perspiration, but possesses no other advantage over the hydrochlorate. Dose:  $\frac{1}{2}$  to  $\frac{1}{2}$  grain, as an anodyne and hypnotic.

*Morphia, Hydrochlorate of*,—Is placed in the *materia medica* of the P. L. It is prepared by precipitating an aqueous solution of opium with a solution of muriate of lime, and afterwards purifying the crystals.

*Characters and Tests, L.*—Soluble in rectified spirit and in water. What is thrown from the watery solution by nitrate of silver is not perfectly dissolved by hydrochloric or nitric acid, nor by ammonia, unless added in excess. Its other characters correspond with those of acetate of morphia.

**MORPHIA.**—Concentrate an aqueous solution of opium, and add chloride of tin till no further precipitate appears. Let the liquid settle, pour it off, wash the precipitate, and mix it with the poured-off liquid. Add ammonia to the mixture; digest the precipitate in ether to remove the narcotine, and then with alcohol, as long as the latter acquires a bitter taste. Partially remove the alcohol by distillation, and the pure morphia may be obtained in crystals. .

**Mounting Fluid for Microscopical Objects.**—Best gelatine, 1 oz., honey, 5 oz., distilled water, 5 oz., rectified spirit,  $\frac{1}{2}$  oz., creosote, 6 drops. Dissolve the gelatine in the water by heat, and add to it the honey, previously made boiling hot. When cooled a little, add the creosote dissolved in the spirit, and, while still hot, filter through coarse filtering paper, or fine flannel. For use, the bottle in which it is contained may be set in a vessel of hot water.—*Deane*.

**MUCILAGE.**—An aqueous solution of gummy matters, as acacia, tragacanth, starch, or quince-seeds. 10 oz. of acacia may be mixed with 1 pint of boiling water, or tragacanth, 2 drachms to 9 oz. of boiling water, to form the respective mucilages. They are used to make pastes, pill-masses, &c., and to suspend various ingredients in solution; the mixed mucilages are applied to labels, to cause them to adhere.

**MUSK**—is a brown substance of peculiar odour; it is obtained from the musk-deer. It is chiefly used as a perfume, but

occasionally as medicine. It is a reputed antispasmodic, stimulant, and narcotic, though seldom used, on account of its high price, and its consequent almost universal adulteration. As a medicine the dose is 8 to 20 grains, in a bolus. Musk is imitated artificially by pouring 3½ drachms of nitric acid on 1 drachm of oil of amber, washing and drying the remaining resin.

**MUSTARD**—is a well-known condiment, when ground and mixed for the table. It is used medically as an emetic in poisoning, and externally as a poultice. With hot liquids, as milk, &c., it assists perspiration, and acts as a diuretic. It is usually mixed with wheat-flour and coloured with turmeric for sale.

*Mustard, Poultice of, L.*—Mustard-seed and linseed, of each 2½ oz., or a sufficient quantity, boiling water, 10 oz.; add the powders, first mixed together, to the water by degrees, stirring, so as to make a poultice. Used as a counter-irritant in coma, apoplexy, &c.; it can seldom be borne more than 15 to 25 minutes, and if used too long is apt to produce sloughing sores. The pain of its application may be relieved by bathing the inflamed part with ether or cold water.

*Mustard, Mixed for the Table.*—It is most frequently used simply mixed with water, but some add salt, vinegar, &c., as improvements. 1. Steep mustard-seed for 8 days in twice its bulk of distilled vinegar, then grind it to a paste. 2. Boil ginger and salt in the water with which the mustard is to be mixed. 3. Add the liquor of walnuts, or other pickles, to the ground mustard, and mix.

**MYRRH.**—A gum-resin, soluble in rectified or proof-spirit. Tonic, stimulant, emmenagogue. It is seldom prescribed alone, but is given in pill and mixture. The tincture is rendered milky on the addition of water.

**NAPHTHA.**—A bitumen of yellow colour and strong odour, which becomes colourless on distillation. It is inflammable, boils at from 160° to near 600° F. “A thermometer inserted into a retort in which the oil is undergoing distillation, never shows for any length of time a constant

temperature; hence it is inferred to be a mixture of several different substances. All the varieties are, however, carbides of hydrogen." Sp. gr. 0.753 to 0.836. It imparts its odour and taste to water, with which, however, it will not combine; it mixes with alcohol and oils. As a solvent, it acts on iodine, sulphur, phosphorus, camphor, most of the resins, wax, fats, and spermaceti. With India-rubber, it forms a gelatinous varnish. If adulterated with oil of turpentine it will turn dark, and thicken on the addition of sulphuric acid. It is used for the purposes of illumination, and as a solvent for India-rubber, and it is distinguished as *mineral* naphtha. Pure naphtha is used by the chemists to preserve sodium, potassium, &c.

The term naphtha is applied to the product from coal-tar, (coal-naphtha,) which is used for coarse paints and varnishes, and as a solvent for India-rubber. Coal-tar yields, on distillation, a thin dark-coloured volatile oil, which, when agitated with sulphuric acid to remove ammonia, and twice rectified with water, becomes nearly colourless; is volatile, inflammable, lighter than water, and an excellent solvent of camphor. Two other liquids have also been called naphtha, but very improperly; they are the pyro-acetic spirit, and the pyroxilic spirit, (wood-naphtha;) they differ from naphtha in not being able to dissolve camphor; they mix with water, and have a different smell and composition when compared with naphtha.

**NAPHTHA VITREOLI.**—Sulphuric ether.

**NERVOUS CORDIALS.**—Chiefly gin, with a little bark, gentian, and aromatics.

**NICKEL.**—A white malleable metal, sp. gr. 8.8; strongly magnetic, but loses this property when heated to 660° F. Its equivalent is 29.6; its symbol, (Ni.) In the arts it is used to form alloys resembling silver, known as alpata, electrum, British-plate, German-silver, paekfong, teutanag, &c.; the commonest of which are, nickel, 3 to 4 parts, with 20 parts copper, and 16 parts zinc; the best are nickel, 5 to 6 parts, with 20 parts copper, and 8 to

10 parts zinc. These alloys are used for harness, furniture, drawing and mathematical instruments, spectacles, the tongues for accordions, and numerous small works. Nickel is not oxidized at common temperatures, and an alloy with iron is not disposed to rust, but with steel, oxidization takes place more rapidly than when the steel is unalloyed. An alloy of nickel, 10 oz., sheet-iron, 7 oz., and tin, 10 lbs., has lately been introduced as an improvement in the tinning of culinary vessels. This alloy bears, uninjured, a heat which would fuse the old tinning to the bottom of the pan. Nickel is very infusible, is scarcely acted on by sulphuric or hydrochloric acid, but nitric acid dissolves it easily. It has many salts, but they are not used in medicine.

**NICOTINE.**—A colourless volatile liquid, with an odour of tobacco; is soluble in water, ether, alcohol, and oils, and with acids forms salts. It boils at 375° F. It is procured from tobacco by distillation, and is a strong poison.  $\frac{1}{4}$ th of a drop kills a rabbit; 1 drop will kill a large dog. Good tobacco yields 1 per cent. of nicotine.

**NITRATE OF IRON (Saturated Solution).**—Red oxide of iron, 4 drachms, nitric acid, 6 drachms. Dissolve, add 1 oz. of water, and filter.

**NITRIC ACID.**—No directions are now given in the P. L. for its preparation. The former instructions were as follow: “Dry purified nitrate of potash and sulphuric acid, equal parts; mix in a glass retort, and distil with a moderate heat into a cool receiver, so long as the vapour comes over.” By re-distilling, the acid comes over colourless. It is not usually prepared on a small scale; the residuum in the retort is sold as a flux, &c., under the name of *sal enixum*.

**Characters and Tests, L.**—Free from colour, sp. gr. 1.42, emits acrid vapours on exposure to air; is totally volatilized by heat. Diluted with three parts of water by measure it gives no precipitate with either nitrate of silver or chloride of barium. 100 grains of this acid are neutralized by 161 grains of crystallized carbonate of soda. This is an alteration from the P. L. of 1836,

which remarked: "Sp. gr. 1.50; 100 grains of this acid will saturate about 217 grains of crystallized carbonate of soda," consequently the strength of diluted nitric acid is *less* now than formerly, and must be prescribed in larger quantities to produce the same effect as before.

The strong nitric acid is applied externally as a caustic to warts, ulcers, &c.; diluted, it is used internally as a tonic and refrigerant.

**NITRIC ACID, DILUTED, *L.***—Nitric acid, 3 oz., distilled water, 17 oz.; mix. Sp. gr. 1.082; a fluid ounce is saturated by 154 grains of crystallized carbonate of soda. Dose: 10 to 40 drops, in fever, indigestion, liver-complaint, heartburn, &c.

**NITROGEN** may be obtained in two or three ways. 1. In a little saucer or dish place some phosphorus, float the vessel in the pneumatic trough, ignite the phosphorus, and place a bell jar over it. As the air is partially consumed, water rises into the jar, and when the fumes have subsided, nitrogen is left in the upper portion of the jar. It is sufficiently pure for most purposes, but may be rendered purer by agitating it with a solution of potash.

2. Fill a porcelain tube with copper turnings, heat the tube to redness, and pass it through a stream of air; the oxygen becomes removed by the heated copper, and nitrogen is evolved.
3. Pass chlorine into a solution of ammonia; the nitrogen is set free with effervescence, and passes off very pure. The whole of the ammonia should not be decomposed, otherwise there may ensue an explosion from the chlorine combining with an ammoniacal salt.
4. Heat nitrate of ammonia in a retort and collect the gas. Colourless, tasteless, inodorous, sp. gr. 0.972; 100 cubic inches at 60° (barometer, 30 inches,) weigh 30.14 grains. Not poisonous; incapable of supporting combustion or respiration; almost insoluble in water or caustic alkali, neutral to test paper, and does not affect lime water.

*Nitrogen, Chloride of.*—Hot water, 14 oz., sal ammoniac, 1 oz.; dissolve. Put a leaden eup in the bottom of a basin, pour in the solution, and when at about 90° F. invert into it a bottle of chlorine, the neck of which is free from grease. In about 20 minutes the desired substance appears, yellow oily globules form on the surface of the liquid, and finally sink into the leaden eup below the mouth of the bottle. The eup may be then withdrawn, and the water poured away.

Volatile, irritating; sp. gr. 1.653; at 200° F. explodes violently, and is the most dangerous compound known. It may be distilled at 160°, though the experiment is fearfully dangerous. In contact with oil, fat, or grease, it at once detonates; naphtha and oil of turpentine have a similar effect. A grain the size of a mustard seed, touched with phosphorus, will shatter a vessel of earthenware, glass or cast-iron; a leaden eup will be deeply indented. Sir H. Davy, and his discoverer, Dulong, were both injured by experimenting on it; small quantities only should be prepared, and a strong wire mask be worn on the face of the operator.

**NITROGEN, PROTOXIDE OF, OR LAUGHING GAS.**—Heat solid nitrate of ammonia in a retort, and collect the gas. This comes over at 480° F., and should not much exceed this, as at 600° F. nitrate of ammonia explodes.

This gas is colourless, transparent, slightly odorous, sweetish taste, is absorbed by water, and supports combustion. Sp. gr. 1.525, 100 cubic inches weigh 47.29 grains. It should be in contact with warm, and not with cold water in the trough or gasometer, as cold water absorbs nearly its own volume. Under a pressure of 50 atmospheres at 45° it is liquefied, and the liquid under the air-pump becomes solid like snow. When breathed, it excites the system, and disposes the inspirer to mirth or passion, as the case may be. Some laugh outrageously, only staying to recover breath that they may laugh again; others leap round the room, recite plays or poetry, &c., while some feel decidedly pugnacious, and may do injury if not prevented. A sailor,

who had breathed it at an exhibition in London, drew a knife and stabbed one of the company.

**NITROMURIATIC ACID, D.**—Nitric acid, 1 part, muriatic acid, 2 parts. A solvent of gold and platinum, forms a white precipitate with nitrate of silver, and bleaches indigo. The P. D. orders it “to be kept in a green glass stoppered bottle in a cool place.” Medicinally it is tonic, used in liver complaint; the dose of diluted acid is 10 to 20 drops. Externally it is used as a foot or hip-bath, by adding 2 oz. to each gallon of water, and using the bath for 20 or 30 minutes.

**NITROUS ACID.**—The produce of dry nitrate of lead when distilled; not prepared on the small scale. Sp. gr. 1·42, boils at 82° F. Mixed with nitric acid it forms the aquafortis, or fuming nitric acid of commerce.

**NORFOLK FLUID.**—Rosin, 6 oz., wax, 12 oz.; melt, add oil, 1 quart, and thin when cooling with turpentine. Used to soften and preserve boots and shoes.

**NOVARGENT.**—1. Freshly precipitated muriate of silver in a solution of hyposulphite of soda.  
 2. Freshly precipitated chloride of silver in the same solution.  
 3. Oxide of silver in a solution of cyanide of potassium. Used to restore silver-plated goods.

**NYCTHEMERON.**—Twenty-four hours—a night and a day.

**OIL GAS** is obtained by heating to redness a retort in which there are a few pieces of coke, brick, or stone. The oil is allowed to drop on the stone, and the vapour is collected. *Said* to be more brilliant than coal gas, but it is not preferred for general use, from its high price, &c.

**OILS** are distinguished as *volatile* and *fixed*; the former may be distilled without decomposition, the latter cannot. On paper they all produce a greasy stain; the volatile oil disappears on the paper being warmed, the fixed oil does not. The fixed oils are divided into *drying* oils, as linseed, rape, poppy, and walnut oils, and *non-drying*

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oils, as olive, palm, and all animal oils. Oils and fats, when cooled, yield a solid substance termed *margarin*, over which floats *olein*; others yield *stearin*, and other substances now used in the arts.

*Oil, Castor.* is obtained from the East Indies very pure; the American and West Indian oils are also used. It is a thick, transparent oil, entirely soluble in alcohol, in which it differs from fixed oils generally, and is thus tested when adulterated with olive oil, &c., as it should be completely dissolved by its own weight of aleohol, if pure. It is a popular purgative, speedy in its aetion, mild and unirritating in its effects. Dose:  $\frac{1}{2}$  to 1 oz., generally taken in water, gin, peppermint water, or diluted compound tincture of lavender.

*Oil, Cod Liver.*—Obtained from the liver of the cod-fish, and purified. Some patients prefer the oil in its unre- fined state. Used in consumption, loss of flesh, rheu- matism, and general deeyay or debility. Dose to begin: 1 to 2 draehnis, increased by use to  $\frac{1}{2}$  oz. or 1 oz., two or three times daily. It often causes nausea at first, but this afterwards subsides, and it may then be taken in larger quantities. Some take it in spirit, water, or milk, while others prefer it unmixed. It has oceasionally been administered in mixtures.

*Oil, Croton.*—From the seeds of the *croton tiglium*, by pressure. Pale yellow oil, thick, tenaeious, soluble in ether, but not entirely soluble in aleohol. It is a drastic irritant eathartie, and rubefaeient. Used in obstinate constipation, and when the patient is insensible, as in coma, mania, &c. Sometimes used in dropsy. Dose: 1 to 2 drops generally; sometimes 8 or 10 are required. It is uneertain in its operation as to quantity and de- pressant effects subsequently.

*Oil, Ethereal, L.*—Recetified spirit, 2 pints, sulphuric acid, 36 oz., solution of potash and distilled water, of each 1 oz. or sufficient. Mix the aeid eautiously with the spirit. Let the liquor distil until a blaek froth arises, then remove the retort from the fire. Separate the lighter supernatant liquor and expose it to the air

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for a day. Add to it the solution of potash, first mixed with the water, and shake them all together; lastly, when well washed, separate the ethereal oil which subsides.

*Characters and Tests, L.*—Sp. gr. 1.05. It instantly subsides in the form of globules when dropped into water. It is dissolved by ether, and does not change the colour of litmus.

Not used alone in medicine; it is an ingredient in the compound spirit of ether, P. L.

*Oil, Almond.*—Obtained by pressure from bitter or sweet almonds. Used in liniments and linctuses, and with syrup of violets or roses as a laxative for infants. Dose for infants,  $\frac{1}{2}$  drachm.

*Oil, Bitter Almond.*—Essential oil of almonds. Distilled from the bitter almond cake after the oil is expressed. Pale yellow. Sp. gr. 1.083. Used to flavour pastry and cordials. *Poisonous*; 4 times as strong as Prussie acid. Dose,  $\frac{1}{4}$  to 1 drop.

*Oil of Aniseed.*—Carminative. Dose: 1 to 5 drops, with sugar and water. Distilled from the fruit.

*Oil of Caraway.*—Carminative. Dose, 2 to 6 drops. Distilled from the fruit.

*Oil of Chamomile.*—Yellow, strong odour, nauseous taste. Stimulant, antispasmodic, combined with pills, &c., and used to seent the extraet of chamomile. Dose, 1 to 5 drops. Distilled from the flowers.

*Oil of Cinnamon.*—Distilled from the bark. Aromatic stimulant. Dose, 1 to 3 drops.

*Oil of Cloves.*—Distilled from the unexpanded flower, the bud. Stimulant, added to purgatives to check griping, and used to ease toothache. Dose, 1 to 5 drops.

*Oil of Cajeput.*—Distilled from an infusion of the leaves of the *melaleuca minor*. Lighter than water, pale green colour, seent and taste resembling eamphor, soluble in spirit, and slightly so in water. Stimulant, anti-spasmodie. Used in colic and flatulence, to relieve toothache, and make stimulating liniments. Dose, 2 to 6 drops on singar.

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*Oil of Copai'a.*—Distilled from the oleo-resin. Used in gonorrhœa, gleet, &c. Dose, 10 to 20 drops.

*Oil of Cubebs.*—From coarsely ground cubebs. Carmi-native, diuretic, stimulant. Used in gonorrhœa, piles, &c. Dose: 10 drops, increased to 1 drachm, with mucilage, yolk of egg, or on sugar.

*Oil of Dill.*—Distilled from the fruit or seed. Carmina-tive. Dose, 2 to 5 drops.

*Oil of Fennel.*—Distilled from the fruit. Carminative. Dose, 1 to 5 drops.

*Oil of Juniper.*—Distilled from the fruit. Diuretic. Dose, 2 to 6 drops.

*Oil of Lavender.*—Distilled from the flower. Pale yel-low, very fragrant. Sp. gr. 0.877 to 0.905, the lightest is the best. English oil is superior to foreign. Stimu-lant, agreeable flavour; seldom used internally. Dose, 2 to 6 drops.

*Oil of Lemon.*—Volatile oil expressed from the rind of the fruit. Agreeable flavour and odour. Dose, 2 to 3 drops.

*Oil of Linseed.*—Expressed from the seed. Used, mixed with lime-water, as an application to burns, and in the arts for numerous purposes. When boiled, it is known as *boiled oil*.

*Oil of Nutmeg.*—Expressed from the seed. Stimulant, aromatic. Seldom used internally. Dose, 1 to 4 drops.

*Oil of Neroli.*—Oil of orange flowers.

*Oil of Olives.*—Expressed from the fruit. Florence oil is the best, and Spanish oil the worst. Nutritious, de-mulcent, laxative, emollient. Used as a salad oil and fish sauce, and medicinally in liniments, plasters, and ointments. As a laxative or demulcent for coughs, it is sometimes made into emulsion with yolk of egg. Olive oil turns rancid when long kept.

*Oil of Pennyroyal.*—Distilled from the flowering herb. Carminative, antispasmodic. Dose: 2 to 5 drops.

*Oil of Peppermint.*—Antispasmodic, corrects griping purgatives. Dose, 2 to 5 drops. Distilled from the flowering herb.

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*Oil of Pimento*.—Distilled from the fruit. Carminative, corrects griping purgatives. Dose: 2 to 6 drops.

*Oil of Rosemary*.—Distilled from the flowering tops. Stimulant. Only used externally.

*Oil of Rue*.—Distilled from the flowering herb. Antispasmodic, emmenagogue. Dose, 3 to 5 drops.

*Oil of Savine*.—Distilled from the tops. Rubefacient, emmenagogue, poisonous. Dose, 2 to 6 drops.

*Oil of Spearmint*.—Distilled from the flowering plant. Antispasmodic, corrects griping purgatives. Dose, 2 to 5 drops.

*Oil of Turpentine*.—Distilled from turpentine. Colourless, volatile, neutral to test paper. Sp. gr. 0.872 at 60° F. Used to make varnishes and paints, and to illuminate lamps. Medicinally, as a vermifuge, diuretic, &c. Dose, 6 to 60 drops, or, as a vermifuge,  $\frac{1}{2}$  to  $1\frac{1}{2}$  oz. In this large dose it both kills and expels tape worms, and in enemas is efficient against the ascaride or thread worm. Externally, alone, it is a powerful rubefacient, and is used as a counter-irritant; weakened, it assists in forming useful liniments, as, olive oil, 1 oz., hartshorn and oil of turpentine, of each  $\frac{1}{2}$  oz., eamphor, 3 drachms; mix.

**OINTMENTS** are unctuous preparations, having the consistence of butter; they are mostly intended as external and local applications. They become rancid if kept too long, or in a warm place, but will keep better by the addition of a little benzoic acid or gum benzoin.

*Ointment of Ammonio-chloride of Mercury, L.*.—Ammonio-chloride of mercury, 2 drachms, lard, 3 oz. Rub them together. Stimulant, detergent. Used for porrigo and impetigo of the scalp, for scabies, and chronic inflammation of the eyelids.

*Ointment of Belladonna, L.*.—Extract of belladonna, 1 drachm, lard, 1 oz.; mix. Anodyne. Used to allay the pain of rheumatism, ulcers, &c.

*Ointment of Cantharides, L.*.—Finely powdered cantharides, 1 oz., distilled water, 12 oz., resin cerate, 1 lb. Boil the cantharides in the water to one-half, and

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strain. Mix the liquor with the cerate, and evaporate to the proper consistence. Used to keep blisters open.

*Ointment of Creosote, L.*—Creosote, 1 drachm, lard, 1 oz.; mix. Used in skin diseases.

*Ointment of Elder, L.*—Elder flowers and lard, of each 1 lb. Boil them together until the flowers are crisp, then press through a linen cloth. Soothing, healing. Used in ordinary eases.

*Ointment of Elemi, L.*—Elemi, 3 oz., turpentine,  $3\frac{1}{2}$  oz., suet, 6 oz., olive oil,  $\frac{1}{2}$  oz. Melt together the elemi and suet, remove them from the fire, and immediately mix them with the turpentine and oil, and strain through linen. Stimulant. Applied to ulcers, and to promote suppuration.

*Ointment of Gall, (Compound,) L.*—Galls in fine powder, 6 draehms, lard, 6 oz., powdered opium,  $\frac{1}{2}$  drachm. Astringent and anodyne. Used in piles.

*Ointment of Hemlock, L.*—Hemlock leaves, fresh, and lard, of each 1 lb. Boil them together until the leaves become friable, then express through linen.

*Ointment of Hypochloride of Sulphur, (Compound.)*— Hypochloride of sulphur, 2 draehms, subcarbonate of potash, 10 grains, purified lard, 1 oz., essential oil of almonds, 10 drops. Mix.—*E. Wilson.*

*Ointment of Iodide of Lead, L.*—Iodide of lead, 1 oz., lard, 8 oz.; mix. Employed in enlargement of joints, and in scrofulous glands.

*Ointment of Iodide of Mercury, L.*—Iodide of mercury, 1 oz., white wax, 2 oz., lard, 6 oz. Add the iodide to the melted wax and lard, and mix. Used for dressing scrofulous sores.

*Ointment of Iodide of Potassium, L.*—Iodide of potassium, 2 draehms, boiling distilled water, 2 drachms, lard, 2 oz. Dissolve the iodide in the water, and mix with the lard. Applied to scrofulous glands and tumours.

*Ointment of Iodide of Sulphur, L.*—Powdered iodide of

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sulphur,  $\frac{1}{2}$  drachm, lard, 1 oz.; mix. Used for the cure of itch and psoriasis.

*Ointment of Lead, (Compound) L.*—Prepared chalk, 6 oz., dilute acetic acid, 6 oz., lead plaster, 3 lbs., olive oil, 18 oz. Melt the plaster in the oil with a gentle heat, then add first the chalk, and afterwards the acid, stirring until cool. Employed to dress inflamed ulcers.

*Ointment of Mercury, L.*—Mercury, 1 lb., lard,  $11\frac{1}{2}$  oz., suet,  $\frac{1}{2}$  oz. Rub the mercury with the suet and a little lard until globules can no longer be seen, then add the remaining lard, and mix. Used where the constitutional effects of mercury are desirable.

*Ointment of Nitrate of Mercury, L.*—Mercury, 2 oz., nitric acid, 4 oz., lard, 1 lb., olive oil, 8 oz. Dissolve the mercury in the acid, and mix the solution while hot with the lard and oil melted together. Very useful in many skin diseases, and applied, reduced with lard, to sore cyclids.

*Milder Ointment of Nitrate of Mercury, L.*—Nitrate of mercury ointment, 1 oz., lard, 7 oz.; mix. To be prepared when wanted for use.

*Ointment of Nitric-Oxide of Mercury, L.*—Nitric-oxide of mercury, 1 oz., white wax, 1 oz., lard, 6 oz. Add the nitric-oxide, rubbed to fine powder, to the wax and lard, melted together, and mix. Useful in skin diseases, in chloric conjunctivis, and in ulcers.

*Ointment of Opium, L.*—Powdered opium, 1 scruple, lard, 1 oz.; mix. Used as a soothing dressing.

*Ointment of Pitch, L.*—Black pitch, wax, and resin, of each 11 oz. Melt them together, and press through a linen cloth. Digestive, stimulant.

*Ointment of Potassio-Tartrate of Antimony, L.*—Potassio-tartrate of antimony, in fine powder, 1 oz., lard, 4 oz.; mix. Used to produce eruptions of the skin, and as a counter-irritant.

*Ointment of Savine, L.*—Fresh bruised savine,  $\frac{1}{2}$  lb., white wax, 3 oz., lard, 1 lb. Melt the wax and lard, mix in the savine, and strain through linen. Used to keep blisters and issues open.

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*Ointment of Spermaceti, L.*—Spermaceti, 5 oz., white wax, 14 drachms, olive oil, 1 pint, or sufficient. Melt all slowly, and stir constantly until cold. Used as a simple dressing.

*Ointment of Sulphur, L.*—Sulphur,  $\frac{1}{2}$  lb., lard, 1 lb. Used as next.

*Ointment of Sulphur, (Compound) L.*—Sulphur, 4 oz., powdered white hellebore, 10 drachms, powdered nitrate of potash, 2 scruples, soft soap, 4 oz., lard, 1 lb.; mix. Used to cure itch; to be applied night and morning.

The simple ointment is less irritating than the compound, and sometimes preferred on that account.

*Ointment of Tar, L.*—Tar and suet, of each 1 lb.; melt together, and press through a linen cloth. Used to remove tetter, tinea capitis, and lepra.

*Ointment of Zinc, L.*—Oxide of zinc, 1 oz., lard, 6 oz.; mix. Used for the eyes, sore nipples, and ringworm.

**OLEIN.**—The light liquor obtained from oil or fat. 1. Add to the oil a solution of caustic soda, sufficient to saponify *half* the oil, and separate the clear portion.

2. Olive oil, 1 part, alcohol, 8 parts; mix, and heat nearly to boiling, cool, and distil the clear upper portion.

**OLEUM VIRIDE.**—Oil coloured with leaves of elder.

**OLIVE OIL TEST.**—Add by degrees  $5\frac{1}{2}$  oz. of mercury to 4 oz. of nitric acid: and when the solution is completed, add water, 7 oz. Of this hyponitrous acid take one part, and of the oil to be tested, 2 parts; agitate together a few minutes, and let the mixture stand for some hours. If genuine olive oil, the whole mass becomes solid; if adulterated, the spurious portion of the oil remains in a fluid state.

**OLLA FICILI.**—A pipkin.

**OPIUM.**—The juice emitted from the incised unripe fruit of the *papaver somniferum*, indurated by exposure to the air. The best variety is the Turkey or Smyrna opium, it yields about 10 to 12 per cent. of morphia, which is more than can be obtained from other kinds. It con-

tains morphia, narcotina, codeia, narceia, meconic acid, &c.; some of these constituents are extracted for use, others are found to be inert and useless. Opium is anodyne, stimulant, narcotic, diaphoretic, or astringent, according to the administration. Dose:  $\frac{1}{4}$  to 1 grain proves stimulant, 2 grains narcotic, poisonous in doses of 5 to 60 grains. Habit, however, renders opium-eaters more insensible to its effects than others, and some of these can take enormous quantities with impunity. In severe disorders, as cholera, tetanus, &c., it has been given to a great extent; in hydrophobia, 2 drachms have been given in 12 hours, without abating the symptoms. Though often administered for hydrophobia, it is utterly useless in most cases of that fearful disease. The preparations of opium and morphia are greatly resorted to as cough medicines, and as anodyne ingredients in medicines for gout, rheumatism, and most painful ailments.

OPODELODOC, as formerly prepared, was much used as a liniment and rubefacient; the soap liniment of the pharmacopœia is now always used instead. *Steer's opodel-doe*, however, contained ammonia and other ingredients; several formulas have been proposed as imitations.

*Opodeldoc, Steer's.*—1. Rectified spirit, 8 pints, (old measure) white soap, 20 oz., camphor, 8 oz., liquor ammonia, 4 oz., oil of rosemary and oil of horsemint, of each 1 oz.; dissolve the soap in the spirit by a gentle heat, add the other ingredients, and bottle whilst warm.—*Philadelphia College*.

2. Castile soap, sliced, 1 lb, camphor,  $2\frac{1}{2}$  oz., oil of rosemary,  $\frac{1}{2}$  oz., oil of origanum, 1 oz., rectified spirit, 4 pints; dissolve by a water bath, strain, and add liquor of ammonia,  $5\frac{1}{2}$  oz. Solid and transparent when cold.

ORANGEADE. A preparation of oranges similar to lemonade. 1. Juice of 4 oranges, peel of 1 orange, lump sugar, 6 oz., boiling water, 1 quart; mix by stirring well, and, when cold, decant the clear. Refrigerant.

2. Juice of two oranges, a little peel, sugar, 3 oz., rum, one teaspoonful; mix with hot water, 1 pint.

3. Pecl of 1 orange, syrup, 1 oz., hot water,  $\frac{1}{2}$  to 1 pint.
4. Instead of plain water, use aerated water, or that charged with carbonic acid gas. Syrup, 1 oz., tincture of orange, 1 drachm; add carbonated water, 1 pint.

**ORANGEADE OR SHERBET POWDERS.**—Loaf sugar, 36 drachms, carbonate of soda, 4 drachms, oil of orange, 15 drops; mix, and divide into 12 blue papers. Divide 6 drachms of tartaric acid in 12 white papers, and mix one paper of each sort for use in half-a-pint of water.

**ORGEAT, SYRUP OF.**—1. Sweet almonds, 1 lb., bitter almonds, 2 drachms; blanch, and make an emulsion with barley water, 2 pints; strain; mix with  $2\frac{1}{2}$  lbs. of white sugar, and add orange-flower water,  $\frac{1}{2}$  oz.

2. Sweet almonds, 5 oz., bitter almonds, 2 oz., white sugar,  $2\frac{1}{4}$  lbs., water, 1 pint. Make an emulsion with the almonds and water, add the sugar, and when dissolved, add orange flower water,  $\frac{1}{2}$  oz.

**OXALIC ACID.**—1. Mix 5 parts of nitric acid, sp. gr. 1.42, with twice its weight of water, and pour on sugar, 1 part, in a retort; red fumes are rapidly disengaged, and, when they slacken, heat is applied as long as gas is evolved. Evaporate the liquor, crystallize, re-dissolve, and again crystallize. The mother liquor will yield more crystals if treated again with fresh nitric acid.—*Liebig.*

2. Nitric acid, sp. gr. 1.4, 4 parts, sugar, 1 part; digest in a water bath.—*Ure.*

The preferable heat is that of steam in this manufacture; the fumes, on the small scale, are allowed to escape, on the large, they are condensed. Oxalic acid crystallizes in white odourless crystals, resembling Epsom salts, for which they are sometimes mistaken; it dissolves in 8 parts of water, at  $60^{\circ}$ , and in its own weight of hot water. The aqueous solution has a powerful acid reaction, it instantly reddens litmus, it tastes sour, and yields no precipitate with liquor potassæ; in all these points sulphate of magnesia is the reverse, and yields a white precipitate with liquor potassæ. Oxalic acid is seldom used medically; it is used to clean boot-tops,

and straw bonnets, to take out ink-stains, and in book-binding and calico printing. It is *poisonous*;  $\frac{1}{2}$  an oz., or a little more, will cause death; the antidote is chalk or magnesia. It is sometimes used as a refrigerant drink by ignorant straw-workers and others.

**OXYGEN.**—1. Heat chlorate of potash nearly to redness in a green glass retort. The gas is pure, and 100 grains of the salt yield 100 to 115 cubic inches of oxygen.

2. Chlorate of potash, by measure, 3 parts, powdered binoxide of manganese, 1 part, both dry; heat in a retort. 100 grains yield 110 cubic inches of pure oxygen. The heat required is not so great as for chlorate alone; the manganese is unaltered, and may be similarly used for further supplies, all the oxygen coming from the chlorate only.—*Faraday*.
3. Bichromate of potash, 3 parts, oil of vitriol, 4 parts; mix and heat as before. Yields pure oxygen.—*Balmain*.
4. Binoxide of manganese and oil of vitriol, equal parts; mix, and apply heat. Each oz. of manganese yields 256 grains of oxygen.—*Liebig*.
5. Heat the red oxide of mercury, (red precipitate) or nitre, as above.
6. Heat to redness the black oxide of manganese. Each oz. yields 128 cubic inches of gas.—*Liebig*. This is the process usually adopted on the large scale, the best in the small way is form 1 or 2.

Oxygen is colourless, tasteless, odourless, incombustible; sp. gr. 1.1057; 100 cubic inches at  $60^{\circ}$ , mercury, at 30 inches, weigh 34.29 grains. It strongly supports combustion, and sustains animal life. Bodies which burn in air are more brilliant in oxygen. A smouldering candle is immediately re-lighted in a jar of oxygen; a match just blown out is re-kindled in the same manner. An iron wire or watch-spring heated at the point and plunged in, throws off brilliant sparks, and if charcoal or anadon be on the point, it has a similar appearance. Sulphur in oxygen is very brilliant, phosphorus is almost too bright to look upon. When oxygen, 1 part, hy-

drogen, 2 parts, are burnt or exploded together, they yield water.

**OXYMEL.**—A syrup of honey and vinegar. *Preparation, L.*—  
Acetic acid, 7 oz., distilled water, 8 oz., honey, 5 lbs.  
Mix the acid and water, add them to the honey made warm. Detergent, used in gargles and cough mixtures.  
Dose: 1 to 2 drachms. In trade more acid is generally added, 1 pint of vinegar being allowed for 3 lbs. of honey.

*Oxymel of Squills.*—Vinegar of squills, 2½ pints, honey, 5 lbs. Evaporate the honey to 12 oz., and mix with the honey made warm. Used chiefly in cough mixtures.  
Dose: ½ to 1 drachm.

**PAINTS, FLEXIBLE.**—Boil 1½ lb. yellow soap with 1 gallon of water, and mix while hot with 1¼ cwt. of oil paint.  
Used to paint on canvass.

*Paints, to Mix.*—For inside work use boiled oil with turpentine and a little driers; for out-door work use but little turpentine. Turpentine assists the drying of paints but spoils the gloss; in *flattened white* this is of no importance, as it is required dull. The best driers are those ready mixed, called patent driers, which may be obtained at any colour shop. All paints are ground in raw linseed oil, ready for mixing, and may be so purchased as ground paints. Wood-work, &c., must be sized before painting, or size must be added to the paint at the time of using, otherwise it will not dry.

**PAPER, TO CLEAN FROM GREASE, &c.**—For photographs, paper, when not clear, should be treated as follows: Dissolve citric acid, 1 part, in distilled water, 20 parts; pour the solution in an earthen dish, and steep the sheets for an hour or two; then soak them in water rendered alkaline by 5 per cent. of ammonia, and finally wash in pure water. Dry the sheets, carefully avoiding dust.

**PAPER (TO DIVIDE.)**—The simple way to sever a sheet of paper into halves consists in placing the leaf about to be divided between two pasted surfaces stronger than itself, drawing the two outsides apart when dry, the

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centre leaf adhering equally to the two outer papers when drawn asunder.

To divide a photograph, or other paper of value, procure two leaves of paper harder than the one about to be split, and slightly tougher; these paste with clean stiff paste, free from lumps, on either side of your picture—which is also to be pasted—to form, as it were, the centre of a three-sheet cardboard, which must be well rubbed down with the hand to get rid of all air bubbles, being afterwards put aside to dry gently. When dry, it will be ready to divide, by drawing the two outside leaves in contrary directions, each having half of the centre sheet adhering thereto; these outside papers, with their half leaf, may now be laid in clean water, to soak the paste into a pulp, as before, when the thin split sheets can be drawn away, rinsed, blotted to remove moisture, and mounted on card, if required. Care must be taken, in starting the severance, to be sure that the sheets divide equally; once well off, all will go right.

PAPER (TO PREPARE) FOR PHOTOGRAPHS.—Dissolve 20 parts of citric acid in 200 parts of distilled water. Pour the solution into an earthen or porcelain dish (the bath should be abundant, so that the paper may swim freely in it—the action is hastened by the application of a gentle heat;) allow several sheets to remain in it for an hour or two, then remove them, and place them on another dish, containing water rendered alkaline by 5 per cent. of ammonia, washing finally in pure water. Removed from this, suspend the papers by one corner, and allow them to dry thoroughly, protected from dust.

PAPER, COPYING.—Mix lard and lamp-black to a paste, rub this over paper, wipe off the waste with a rag, and dry the paper. A clean sheet placed under this while written on with a lead pencil, &c., receives a copy.

PAPER, OILED.—Brush paper with boiled oil and dry the sheets. Used to enclose blacking, white-lead, &c.

PAPER, TRACING.—1. Open a quire of double crown tissue paper, and brush the first sheet with a mixture of mastic

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varnish and oil of turpentine, equal parts; proceed with each sheet similarly, and dry them on lines by hanging them up singly. As the process goes on, the under sheets absorb a portion of the varnish, and require less than if single sheets were brushed separately. The inventor of this varnish for tracing paper, received a medal and premium from the Royal Society (Whittock, 74.) It leaves the paper quite light and transparent, it may readily be written on, and drawings traced with a pen are permanently visible. Used by learners to draw outlines. The paper is placed on the drawing, which is clearly seen, and an outline is made, taking care to hold the tracing paper steady. In this way elaborate drawings are easily copied.

Tissue paper may also be made transparent by using,

2. Nut oil and oil of turpentine, equal parts, dry the paper with wheat-flour immediately.
3. Canada balsam, and turpentine to thin it.

**PAPER, WAXED.**—Place a sheet of stout paper on a heated iron plate, and over this place the sheets of tissue paper to be waxed. Enclose wax or stearine in a piece of muslin, and as it melts spread over the tissue paper equally; proceed with others similarly until enough are prepared. Used to cover gallipots, ointments, &c.

**PAPERS, TEST,** are prepared by dipping unsized sheets into a solution or infusion of the test. The substances used are Brazil wood, buckthorn, acetate and diaacetate of lead, cherry juice, dahlia leaves, elderberry, litmus, mallow flower, protosulphate of iron, starch, turmeric, indigo, cabbage, iodide of potassium, mangancse, rhubarb, &c. They are used to distinguish acids, alkalies, poisons, gases, &c.

**PAPIER MACHE.**—Paper pulp pressed into various forms with size, glue, white of egg, paste, &c. When painted or japanned they are light elegant ornaments, quite waterproof.

**PASTE, ALMOND.**—1. Blanch bitter almonds with hot water,

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wipe them dry with a towel, beat them to a paste, and pass through a fine metallic sieve, add a little white of egg, and perfume at pleasure.

2. Use sweet instead of bitter almonds.
3. Honey and bitter almond paste, (No. 1,) of each 8 oz. ; mix, add oil of almonds, 1 lb., and the yolk of two eggs. Used as cosmetics. The almond and honey soaps are also employed for the same purpose.

PASTE, FLOUR.—The method adopted by the paper-hangers is the best for all general purposes. Beat wheat-flour and cold water to *perfect smoothness*, and pour on boiling water to make it moderately thin. It becomes stiffer on cooling, but if made too thin it will require to be boiled. It produces a beautifully smooth paste without lumps, if properly managed. Many additions are ordered in some receipts, as alum, rosin, sugar, corrosive sublimate, creosote, &c., but they are all useless for common requirements, rosin especially, as it only forms lumps like fine sand, and cannot mix with water. Creosote or corrosive sublimate are added to preserve paste, but it is best when fresh made; for little things the gum paste is better, as for drug and other labels.

PASTE, GUM.—Gum Arabic, with a little gum tragacanth, made to a thick solution. Used to attach labels to bottles, boxes, book-backs, &c. Is firm when applied and soon dries hard.

PASTE, FURNITURE.—Wax and turpentine coloured with alkanet. Sometimes soap, liquor potassæ, or pearl-ash is added, at the option of the maker. See *Furniture Paste*.

PASTE, RAZOR.—1. Prepare putty powder, 1 oz., oxalic acid,  $\frac{1}{4}$  oz., gum, 20 grains; powder, and make into a paste with water. Used spread over razor strops, to give razors a keen edge when dull.

2. Emery in finest powder, 2 parts, spermaceti ointment, 1 part; mix.
3. Coleothar and emery made into a paste with lard.

PASTE, SHAVING.—1. White curd soap,  $\frac{1}{2}$  lb., spermaceti

## PASTE.

and almond oil, of each 1 oz.; beat with the white of 2 eggs, add liquor potassæ, 2 oz., and bitter almond oil to scent.

2. White wax, spermaceti and almond oil, of each 2 drs.; melt, add white soap, 4 oz., and beat together with a little rose-water or eau de cologne.
3. Soap, 2 oz., macerate in rectified spirit, enough to soften it to a paste, add liquor potassæ,  $\frac{1}{2}$  oz., bitter almond oil, 5 drops, otto of roses, 3 drops, oil of lavender, 2 drops, eau de cologne,  $\frac{1}{2}$  oz.; mix. Used instead of plain soaps for shaving. Winter and Thomson's rypophagon soap is excellent.

PASTE, POLISHING.—1. Potash,  $\frac{1}{2}$  lb., dissolve in a little boiling water, add soft soap, 2 lb., rotten stone, 3 lb., oil of thyme,  $\frac{1}{2}$  oz., coleothar and emery, of each  $\frac{1}{2}$  lb.; mix.

2. Boiling water, 1 pint, oxalic acid, 2 oz., soft soap and sweet oil, of each  $\frac{1}{2}$  lb., rotten stone, 4 lb.; mix. Used to clean brass, tin, and other metals. The paste is laid on with a little water, and rubbed until the article is clean, it is then wiped off and the metal polished with powdered rotten stone.

PASTILLES, FUMIGATING.—1. Benzoin, 1 drachm, cascarilla,  $\frac{1}{2}$  drachm, myrrh, 1 scruple, oils of nutmegs and cloves, of each 10 drops, nitrate of potash,  $\frac{1}{2}$  drachm, charcoal, 6 drachms; mix with mucilage of tragacanth.

2. Benzoin, 2 oz., balsam of tolu and yellow sandal-wood, of each  $\frac{1}{2}$  oz., labdanum, 1 drachm, nitre, 2 drachms, charcoal, 6 oz., mix with mucilage of tragacanth.—*Paris Codex*.

3. Yellow sanders and benzoin, of each 3 oz., olibanum and cascarilla, of each 6 oz., storax, 4 oz., myrrh and nitre, of each  $1\frac{1}{2}$  oz., ambergris, 1 drachm, Peru balsam, 2 drachms, oil of cinnamon, 20 drops, oil of cloves, 30 drops, otto of rose, 20 drops, oil of lavender, 90 drops, balsam of tolu,  $1\frac{1}{2}$  oz., camphor,  $\frac{1}{2}$  oz., acetic acid, 2 oz., charcoal, 3 lbs.; mix with mucilage of tragacanth.

4. Benzoin and cascarilla, of each 1 oz., myrrh, 8 scruples,

oils of nutmegs and cloves, of each 4 seruples, nitre,  $\frac{1}{2}$  oz., chareoal, 6 oz.; mix as last.—*Dr. Paris.*

5. *Incense.*—Benzoin, 12 oz., storax and frankincense, of each  $2\frac{1}{2}$  oz., musk, 15 grains, burnt sugar,  $\frac{1}{2}$  oz., gum tragaeanth,  $1\frac{1}{2}$  oz., rose-water sufficient to make the mass divide in small tablets.—*Astley.*

Used to fumigate rooms and sick chambers, which should be first *well ventilated*, otherwise the disagreeable scent is not covered by the pastilles.

PEAS, ISSUE.—1. Orange berries smoothed in a lathe.

2. Yellow wax,  $1\frac{1}{2}$  oz., turmerie, 1 oz., orris,  $\frac{1}{2}$  oz., and sufficient Veniee turpentine.—*Niemann.*

Used to keep issues open. The following is a composition for opening issues: Bees'-wax, 6 oz., verdigris and white hellebore, of each 2 oz., cantharides, 1 oz., orris,  $1\frac{1}{2}$  oz., Veniec turpentine, sufficient.—*Gray.*

PEARL POWDER.—French chalk, 1 lb., oxide of bismuth and oxide of zinc, of each 1 oz.

*Powdered Talc.*—Does not discolour; is sometimes calcined before pulverizing.

PEAU D'ESPAGNE.—Steep pieces of wash-leather in any liquid scent; cut the leather into square pieces, and between each pair lay a composition of musk, eivet, &c. Use silk or satin to cover the skins. To perfume writing papers, clothes, &c.

PEPPER, KITCHEN.—Ginger,  $\frac{1}{2}$  lb., cinnamon, black pepper, allspice, and nutmeg, of each 2 oz., cloves,  $\frac{1}{4}$  oz., dry salt,  $1\frac{1}{2}$  lb.; powder and mix. Used to flavour gravies.

PERCHLORIC ETHER.—Mix the sulphovinate and perchlorate of baryta in equal parts, powder and distil by an oil bath of  $300^{\circ}$  to  $340^{\circ}$ . The receiver should contain some strong alcohol, and be surrounded with ice or a freezing mixture; when water is added the ether sinks to the bottom. It is very dangerous, from its explosive properties, when separated from alcohol, but is perfectly safe while combined with it. Alone it often explodes without known cause, and always with a slight friction or percussion. Very small quantities only should be

prepared, and the operator be protected with a mask and gloves.

**PHOSPHORIC ACID, DILUTED.**—Phosphorus, 6 drachms, nitric acid, 4 oz., distilled water, 8 oz.; mix the acid and water, add the phosphorus, and distil off 6 oz. in a sand bath, return this to the retort, and let 6 oz. again distil, which are to be rejected. Evaporate the remaining liquor in a platina capsule down to 2 oz., and, when cold, make it up 1 pint with distilled water.

*Characters and Tests, L.*—Colourless, odourless, sp. gr. 1.064. No precipitate falls on the addition of chloride of barium, or nitrate of silver. It does not affect strips of copper or silver, nor is it coloured by hydrosulphuric acid either before or after contact with the metals. A fluid oz. of this acid is saturated by 132 grains of crystallized carbonate of soda, and no precipitate falls.

Seldom used in this country. Dose: 10 to 30 drops, largely diluted, in diabetes, phosphatic urinary deposits, &c.

**PHOSPHORUS** is not prepared on the small scale. It is a pale, semi-transparent, combustible solid, sp. gr. 1.77, its vapour, 4.35, melts at 108° F., boils at 550° F. It is kept in water to prevent its inflaming; it is soluble in ether, naphtha, oils, and especially in bisulphuret of carbon. Used to make matches, and in electrotyping. It is a corrosive poison.

**PHOSPHORUS PASTE.**—Put into a Florence flask 1 drachm of phosphorus and 1 oz. of rectified spirit. Dip the flask into hot water until the phosphorus is melted; then cork the flask, and agitate it until the contents are cold. Pour off the spirit, and mix the phosphorus with 1½ oz. of lard, then add a mixture of flour, 5 oz., sugar or cheese, 1½ oz., and make the whole into a paste with a little water. Used to destroy vermin.

**PHOSPHORETTED HYDROGEN.**—Boil together in a small retort, phosphorus and liquor potassæ, or hydrate of lime; let the beak be kept under water, and as the bubbles rise they inflame on contact with the air. The retort at first should be filled to the neck, and caution should be used. The gas is very fetid, sp. gr. 1.24.

PHOTOGRAPHIC SENSITIVE PAPER.—1. Common salt, 20 grains, water, 1 oz.; wash the paper with this solution, and when dry, wash with the following solution: nitrate of silver, 60 grains, distilled water, 1 oz. When dry, it is ready for use, in copying feathers, lace-work, leaves, &c.

2. Wash the paper with a solution of nitrate of silver, 6 grains, distilled water,  $\frac{1}{2}$  oz.; dry the paper, and wash it with iodide of potassium, 5 grains, distilled water,  $\frac{1}{2}$  oz. Dry with a gentle heat, repeat the wash with the silver solution, and when dry, the paper is ready for use. The sensitive surface is an iodide of silver, and is easily affected by light.

PICKLES serve to flavour meats, and are very generally used. They should not be prepared in metallic vessels, as the salts formed by such contact are poisonous. Vinegar should be boiled in a stone-ware jar in a water bath, and the pickles, when made, are best kept in glass jars well covered, having a wood or horn spoon to remove them when required.

*Pickle, Lemon.*—1. Wipe 6 lemons and slice them, add salt, 1 lb., garlic, 1 lb., 6 cloves, horseradish and mustard, of each 2 oz., cloves, mace, nutmeg, and Cayenne, of each  $\frac{1}{4}$  oz., vinegar, 2 quarts; digest 6 weeks, and bottle.

2. Lemon-juice and vinegar, of each 3 quarts, bruised ginger, 4 oz., allspice, pepper, and grated lemon-peel, of each 2 oz., salt, 14 oz., Cayenne,  $\frac{1}{2}$  oz., mace and nutmegs, of each  $\frac{1}{4}$  oz.; digest and bottle.

*Pickle, Meat.*—1. Sugar, 2 lbs., bay or common salt, 4 lbs., saltpetre, 8 oz., water, 6 quarts; dissolve.

2. Salt, 6 lbs., sugar, 1 lb., saltpetre, 3 oz., water, 4 gallons; boil, skim, and cool. When partly exhausted by use, add one-third of the above ingredients, and boil again.

Meat is immersed in the above to keep it in warm weather; the meat acquires a fine red colour.

*Pickled Onions.*—Choose small round onions, remove the skins, and seal them with brine, wipe with a towel,

and pour on them hot spiced vinegar. When cold cover them, and preserve them in small jars.

All the usual pickles are preserved similarly, as cucumbers, walnuts, gherkins, mushrooms, samphires, cauliflowers, melons, &c. Red cabbage is prepared without salt, and with cold vinegar.

**PIERRE INFERNALE.**—Fused nitrate of silver.

**PILLS** are small globes of solid medicines, chiefly made up because the substances are nauseous, or such as operate in small doses. The powders, &c., are made to combine, by using honey, treacle, syrup, soap, extract, mucilage, or conserve of rose, according to the formula, and when the mass is sufficiently tenacious it is divided into pills. They generally weigh 5 grains each, and should never exceed this quantity.

*Pill of Aloes, (Compound,) L.*—Socotrine aloes, in powder, 1 oz., extract of gentian,  $\frac{1}{2}$  oz., oil of caraways, 40 drops, treacle, a sufficient quantity. Beat together to a pill mass. Purgative, stomachic. Used in habitual costiveness. Dose: 5 to 20 grains. Aloes are more easily powdered by adding 2 or 3 drops of olive oil to each ounce.

*Pill of Aloes with Myrrh, L.*—Powdered Socotrine aloes,  $\frac{1}{2}$  oz., saffron, powdered myrrh, and soft soap, of each 2 drachms, treacle, a sufficient quantity. Beat together to a pill mass. Purgative, emmenagogue. Used in chlorosis and amenorrhœa. Dose: 5 to 15 grains.

*Pill of Aloes with Soap, L.*—Extract of Barbadoes aloes powdered, soft soap, and extract of liquorice, equal parts, treacle, a sufficient quantity. Beat the aloes with the soap, add the other ingredients, and make a pill mass. Purgative. Dose: 5 to 15 grains.

*Pill of Arseniate of Soda, (Compound.)*—Arseniate of soda, 2 grains, dissolved in a little distilled water, guaiacum,  $\frac{1}{2}$  drachm, oxysulphuret of antimony, 20 grains, mucilage to mix. Divide into 24 pills.—*E. Wilson.*

*Pill of Calomel, (Compound,) L.*—Chloride of mercury and oxysulphuret of antimony, of each, 2 drachms, guaiacum, resin powdered, and treacle, of each  $\frac{1}{2}$  oz. Rub the mercury with the antimony, and afterwards

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with the guaiaeum and treacle, to make a mass. Alternative. Employed in cutaneous eruptions, in skin disorders, and in secondary syphilis. Dose, 5 to 10 grains.

*Pill of Colocynth, (Compound,) L.*—Extract of colocynth, 1 drachm, powdered extract of aloes, 6 drachms, powdered saffron, 2 drachms, powdered cardamoms,  $\frac{1}{2}$  drachm, soft soap,  $1\frac{1}{2}$  drachms. Mix the powders together, then the other ingredients, and form a mass. Purgative. Used as a common aperient, generally combined with blue pill, calomel, or extract of henbane.

*Pill of Galbanum, (Compound,) L.*—Prepared galbanum, 2 drachms, myrrh and prepared sagapenum, of each 3 drachms, prepared assafoetida, 1 drachm, soft soap, 2 drachms, treacle, a sufficient quantity; beat together to a mass. Stimulant, antispasmodic. Dose, 5 to 20 grains, in hysteria or amenorrhœa.

*Pill of Gamboge, (Compound,) L.*—Gamboge in powder, 2 drachms, powdered Socotrine or hepatic aloes, 3 drachms, powdered ginger, 1 drachm, soft soap,  $\frac{1}{2}$  oz. Mix the powders, add the soap, and form a mass. Used as an active cathartic in obstinate constipation, in dropsies, and to expel tape-worm. Dose, 10 to 15 grains.

*Pill of Hemlock, (Compound,) L.*—Extract of hemlock, 5 drachms, powdered ipecacuanha, 1 drachm, treacle, a sufficient quantity; beat together to a mass. Antispasmodic, expectorant, narcotic. Used in spasmodic cough, bronchitis, and incipient consumption. Dose, 5 to 10 grains.

*Pill of Ipecacuanha with Squill, L.*—Compound powder of ipecacuanha, 3 drachms, fresh squill, powdered, and powdered ammoniaeum, of each 1 drachm, treacle, a sufficient quantity; beat together to a mass. Expectorant, sedative, sudorific. Used in chronic bronchitis, asthma, and coughs. Dose, 5 to 15 grains.

*Pill of Iron, (Compound,) L.*—Powdered myrrh, 2 dr., carbonate of soda, sulphate of iron, and treacle, of each 1 drachm. In a warm vessel rub the myrrh with the

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soda, add the iron, and rub again; mix in the treacle, and form a mass. Tonic. Used in chlorosis. Dose, 5 to 10 grains.

*Pill of Mercury, L.*—Mercury,  $\frac{1}{2}$  oz., confection of roses, 6 drachms, powdered liquorice, 2 drachms. Rub the mercury with the confection until the globules disappear, add the liquorice, and make a mass. Purgative, alterative. Dose: as an alterative, 1 to 3 grains, as a purgative, 5 to 10 grains, followed by an aperient.

*Pill of Rhubarb, (Compound,) L.*—Powdered rhubarb, 4 drachms, powdered aloes, 3 drachms, powdered myrrh, 2 drachms, soft soap,  $\frac{1}{2}$  drachm, oil of caraway, 15 drops, treacle, a sufficient quantity. Mix the powders, add the other ingredients, and form a mass. Stomachic, purgative. Dose, 5 to 20 grains.

*Pill of Soap, (Compound,) L.*—Powdered opium and powdered liquorice, of each 2 drachms, soft soap, 6 dr.; beat to a mass. Five grains contain 1 grain of opium. Dose, 3 to 10 grains. Anodyne.

*Pills, Tonic, Purgative.*—Aloes, 2 drachms, gamboge, 1 drachm, scammony,  $\frac{1}{2}$  drachm, sulphate of iron,  $\frac{1}{2}$  dr., sulphate of quinine, 8 grains, extract of gentian or dandelion, q. s. Make 120 pills. Three operate effectually, without griping.

*Pill of Squill, (Compound,) L.*—Freshly-powdered squill, 1 drachm, powdered ginger and powdered ammoniacum, of each 2 drachms, soft soap, 3 drachms, treacle, a sufficient quantity. Mix the powders, add the rest, and form a mass. Expectorant, diuretic. Used in chronic coughs. Dose, 5 to 15 grains.

*Pill of Storax, (Compound,) L.*—Prepared storax, 6 drachms, powdered opium and saffron, of each 2 dr.; beat to a mass. Anodyne. Dose, 5 to 10 grains, in chronic coughs. Five grains contain 1 grain of opium.

PLASTERS are compounds intended for external application only. The mixed articles are thinly spread for use on linen, calico, or leather, and the plaster is then made to adhere by slightly warming it, and applying to the

## PLASTERS.

skin. After removing a plaster, the skin may be cleansed with a little turpentine.

*Plaster of Ammoniacum, L.*—Prepared ammoniacum, 5 oz., diluted acetic acid, 8 oz. Dissolve the ammoniacum in the acid, then evaporate slowly to a proper consistence, constantly stirring. Stimulant, discutient. Applied to scrofulous tumours and chronic swellings.

*Plaster of Ammoniacum with Mercury, L.*—Warm olive oil, 1 drachm, sulphur, 8 grains, mix until they unite, rub in 3 oz. of mercury until the globules disappear, then add 1 lb. of prepared ammoniacum, previously melted, and mix. More powerful than ammoniacum plaster, but similarly employed.

*Plaster of Belladonna, L.*—Soap plaster and extract of belladonna, of each 3 oz. Melt the plaster by the heat of a water-bath, add the extract, and stir until of a proper consistence. Anodyne and antispasmodic.

*Plaster of Cantharides, L.*—Finely-powdered cantharides, 1 lb., wax and mutton suet, of each  $7\frac{1}{2}$  oz., resin, 3 oz., lard, 6 oz. Melt the wax, suet, and lard together, add the resin, melted, then remove from the fire, and, when cooling, stir in the cantharides, and mix. Used as a blistering plaster.

*Plaster of Cummin, L.*—Cummin, caraway, laurel berries, and wax, of each 3 oz., prepared Burgundy pitch, 3 lb., olive oil and water, of each  $1\frac{1}{2}$  oz. Melt the pitch and wax, add the oil, the water, and the dry ingredients, powdered, then evaporate to the required consistence. Stimulant, detergent. Applied to languid ulcers, which require stimulating.

*Plaster of Galbanum, L.*—Prepared galbanum, 8 oz., turpentine, 1 oz., melt, add prepared frankincense, 3 oz., plaster of lead, 3 lb., and mix. Stimulant, discutient. Applied to the chest in pulmonary complaints, and to indolent glandular tumours.

*Plaster of Iodide of Potassium, L.*—Prepared frankincense, 6 oz., wax, 6 drachms, melt, add iodide of potassium, 1 oz., mixed in olive oil, 2 drachms, and stir

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until cold. To be spread on linen rather than leather. Applied to chronic enlargements, scrofulous tumours, nodes, &c.

*Plaster of Iron, L.*—Prepared frankincense, 2 oz., lead plaster, 8 oz., melt, sprinkle in 1 oz. of sesquioxide of iron, and mix.

*Plaster of Lead, L.*—Oxide of lead, in fine powder, 6 lb., olive oil, 1 gallon, water, 2 pints. Boil slowly until mixed to a proper consistence, adding, if necessary, a little boiling water. Used as a basis for other plasters, and applied to cuts or excoriations.

*Plaster of Mercury, L.*—Warm olive oil, 1 drachm, sulphur, 8 grains, mix; rub in 3 oz. of mercury until the globules disappear, then add melted plaster of lead, 1 lb., and mix. Alterative, discutient. Less powerful than the plaster of ammoniacum with mercury.

*Plaster of Opium, L.*—Prepared frankincense, 2 oz., melt, add melted plaster of lead, 8 oz., then add extract of opium, 1 oz., dissolved in 1 oz. of boiling water, and evaporate to the proper consistence. Anodyne. Applied to give local relief to painful parts.

*Plaster of Pitch, L.*—Prepared Burgundy pitch, 2 lb., prepared frankincense, 1 lb., wax and resin, of each 4 oz.; melt together and add expressed oil of nutmegs, 1 oz., olive oil and water, of each 2 oz. Stir and evaporate to the proper consistence. Mild counter-irritant. Applied to the chest to relieve coughs, and to the loins in lumbago. Forms a good warm plaster, for the chest in winter.

*Plaster of Resin, L.*—Melted lead plaster, 3 lbs., melted resin,  $\frac{1}{2}$  lb.; mix. Stimulant, adhesive. The usual sticking plaster applied to cuts and wounds to keep them closed.

*Plaster of Soap, L.*—Melted lead plaster, 3 lb., Castile soap,  $\frac{1}{2}$  lb., melted with resin, 1 oz.; mix with the plaster, stir and boil to the proper consistence. Used to support fractured limbs.

**PLATINUM.**—The heaviest metal known, sp. gr. 21.25 to

21·5; resists acids and great heat. Soluble in nitromuriatic acid and in chlorine. All its salts are *poisonous*.

**POIDS DE MARC.**—Eight ounes.

**POLISHING POWDER FOR SPECULA.**—Prepare peroxide of iron, by precipitation, from a diluted solution of sulphate of iron with water of ammonia. Wash the precipitate, press it in a screw press until nearly dry, and expose it to a heat which in the dark appears a dull red.

**POMADE** is the French name for pomatum. It is made by covering lard with perfumed flowers, and changing them when exhausted, until the lard or pomade is sufficiently scented.

**POMADE DIVINE.**—Spermaceti, 4 oz., lard, 8 oz., almond oil, 12 oz., gum benzoin, 4 oz., vanilla beans, 1½ oz. Digest the whole in a steam bath for six hours, and strain.

**POMATUM LAVENDER.**—Lard, 2½ lbs., lavender flowers, 10 lbs., white wax, 4 oz. Add 2 lbs. of flowers to the melted lard and wax, cork the whole in a jar, and simmer in a water-bath for 6 hours; strain, and proceed to add the remaining flowers. When completed, wash it well, re-melt it, and fill small pots, which should be well covered with wet bladder or waxed paper. This is the method adopted for any pomatum of flowers, but most pomatums are made by adding the essential oils to the lard and wax, and they serve equally well.

**POTASH, ACETATE OF, *L.***—Acetic acid, 26 oz., carbonate of potash, 1 lb., or sufficient, distilled water, 12 oz.; add the carbonate gradually to the acid, first mixed with the water to saturation, and strain. Evaporate the liquor in a sand-bath, the heat being cautiously applied until the salt is dry.

**Characters and Tests, *L.***—Soluble in water and in rectified spirit, the watery solution affects neither litmus nor turmeric. Nothing is precipitated from it either on the addition of chloride of barium, or nitrate of silver, but if anything is thrown down by nitrate of silver, from a strong solution, it is again dissolved on the addition

## POTASH.

of water, or dilute nitric acid. Sulphuric acid added evolves acetic vapours. 100 grains of this salt digested in sulphuric acid, evaporated, and the salt dried by a high temperature, leaves 88.8 grains of sulphate of potash.

Diuretic, purgative, used in dropsy, and obstructions of the liver. Dose: 20 to 60 grains as a diuretic, increased to 3 drachms it acts as a purgative. It sometimes causes griping.

*Potash, Bicarbonate of.*—Crystallized.

*Characters and Tests, L.*—“Soluble in water. The solution slightly changes the colour of turmeric to brown; sulphate of magnesia throws down nothing from it unless heat is applied; nitric acid drives off bubbles of carbonic acid, and if nitric acid is first added in excess, chloride of barium causes no precipitate, and nitrate of silver very little, if any. From 100 grains, 30.7 grains of water and carbonic acid are expelled at a red heat.” Antacid, diuretic. Dose: 10 grains to 1 scruple. As an effervescing draught, 1 scruple, to citric acid, 14 grains, or lemon juice, 3½ drachms.

*Potash, Bitartrate of.*—Crystalline.

*Characters and Tests, L.*—“Sparingly soluble in water, the solution reddens litmus. At a red heat it is converted into carbonate of potash.” Laxative, diuretic, refrigerant. Dose: 1 scruple to 1 oz., according to the purpose of administration. It is often given as a diuretic or refrigerant in the *imperial* drink: it forms an ingredient in many tooth powders.

*Potash, Carbonate of.*—See Carbonate of Potash.

*Potash, Chlorate of.*—Crystallized.

*Characters and Tests, L.*—“Soluble in water, the solution gives no precipitate with nitrate of silver. It melts by heat, and at a red heat 100 grains of the salt emit nearly 39 grains of oxygen. A few drops of sulphuric acid gradually added to the crystals, change them to yellow, then red, and yellow fumes of peroxide of chlorine appear. It crackles when rubbed with sulphur.” Seldom employed medicinally. Dose: 10 to 30 grains.

## POTASH.

*Potash, Hydrate of, L.*—Solution of potash, 1 gallon; evaporate in an iron vessel until ebullition being finished, the hydrate of potash liquefies, pour it into moulds.

*Characters, L.*—“In an open vessel it speedily liquefies. It is soluble in rectified spirit.” Used as a powerful caustic. It causes intense pain at the time, and the parts slough and form an issue. It is not used internally.

*Potash, Nitrate of.*—Crystallized. *Characters and Tests, L.*—Soluble in water, and nothing is precipitated from the solution by chloride of barium or nitrate of silver. It melts by heat, but loses no weight; at an intense heat it yields oxygen; from the remaining salt rubbed to powder, sulphuric acid elicits nitrous vapours. On burning charcoal it deflagrates, and leaves carbonate of potash. From 100 grains, digested in sulphuric acid, 86 grains of dried sulphate of potash are obtained by a red heat.

Refrigerant, sedative, diuretic. Used in fever, rheumatism, gonorrhœa, &c. Dose: 8 to 10 grains to several drachms daily, always diluted largely with plenty of liquid. An ounce in a *small* quantity of water has caused death; in large dilution it causes no bad effect.

*Potash, Sulphate of.*—Crystallized. *Characters and Tests, L.*—Slightly soluble in water: what is thrown down from this solution by bichloride of platinum is yellowish, and by chloride of barium, white, and insoluble in nitric acid. It crackles by heat, it melts at a red heat, but loses no weight. From 100 grains dissolved in distilled water, chloride of barium and hydrochloric acid being added, 132 grains of sulphate of baryta are obtained, when dried at a red heat.

Mild laxative, used as a deobstruent, and in diarrhoea. Dose: 10 or 15 grains to 4 drachms.

*Potash, Tartrate of, L.* *Characters and Tests.*—Soluble in water, the solution does not change litmus or turmeric. The addition of almost any acid throws down crystals of bitartrate of potash, which generally adhere to the vessel. What is thrown down from the same solution

by chloride of barium, or acetate of lead, is dissolved by dilute nitric acid.

*Potash with Lime, L.*—Hydrate of potash and lime, (un-slacked,) each 1 oz.; mix, and keep in a well-closed vessel. *Characters, L.*—Mixed with water, it is slacked, and any acid being added it evolves no bubbles of carbonic acid. Only used externally as a caustic.

**POTASSIO-TARTRATE OF ANTIMONY, L.**—Finely powdered tersulphuret of antimony, 1 lb., sulphuric acid, 15 oz., bitartrate of potash, 10 oz., distilled water, 5 pints. Mix the tersulphuret with the acid in an iron vessel, apply heat to this under a chimney, and stir with an iron spatula, increase the fire until, the flame of the ignited sulphur being extinct, nothing but a white powdery mass remains. When cool, wash this with water until nothing acid can be detected, and dry it. Mix 9 oz. of this salt with the bitartrate, and boil in water 30 minutes, filter the hot solution, and let it crystallize, dry the crystals and evaporate the liquor for more.

*Characters and Tests, L.*—Colourless, soluble in water, the solution is not changed by ferrocyanide of potassium, hydrosulphuric acid causes an orange precipitate; chloride of barium or nitrate of silver throws nothing down but what is soluble in more water. Nitric acid throws down a precipitate, and again re-dissolves it. From 100 grains of this salt dissolved in water, hydrosulphuric acid throws down 49 grains of tersulphuret of antimony.

**POTASSIUM.**—A brilliant white metal, the base of potash. To procure it, mix *dry* carbonate of potash, 2 parts, with charcoal in powder, 1 part; distil in an iron vessel with a strong heat, let the product be caught in a copper receiver containing some naphtha, and surrounded with ice. It may be re-distilled if wanted pure. Lustrous, soft at common temperatures, at 32° F. it is brittle and crystalline, melts at 136° F., and distils at a low red heat; sp. gr. 0.865, being lighter than water, equivalent 39, symbol K (kalium.) In air potassium immediately oxidizes, and becomes coated with caustic pot-

ash. Thrown on water it inflames, burns with a purple colour, and leaves an alkaline solution (oxide of potassium.) Potassium is always preserved in naphtha, which, when pure, contains no oxygen.

*Potassium, Ferrocyanide of* (Prussiate of potash.)—Crystallized. *Characters and Tests, L.*—Yellow, soluble in water, the solution is not changed by any alkali, or by tiniture of galls. The precipitate from sulphate of iron is at first white, and then blue, that from sulphate of copper is brown, from sulphate of zinc, white. This salt loses its colour at a gentle heat, and from 100 grs., 12·6 grains of water escape. It is decomposed at a red heat; what remains is soluble in hydrochloric acid, and again precipitated by ammonia. From 100 grains 18·7 grains of sesquioxide of iron may be prepared. If this salt is heated with dilute sulphuric acid it exhales an odour of hydrocyanic acid.

Only employed to obtain dilute hydrocyanic acid; does not appear to possess medicinal virtue; is not poisonous.

*Potassium, Sulphate of.*—Is used chiefly to form baths. It may be given in doses of 3 to 5 grains in skin diseases, or, for a bath, 4 oz. may be dissolved in water, which should be in a wooden, and not a metallic vessel.

*Potassium, Iodide of, L.*—Crystallized. “Soluble in 6 or 8 parts of rectified spirit, and freely soluble in water. The watery solution does not turn turnerie brown, or only very slightly; it does not change the colour of litmus; it becomes blue on the addition of nitric acid and starch together; it is not coloured on the addition of nitric acid with starch. The watery solution has a yellow precipitate, soluble in boiling water, from acetate of lead, but no precipitate occurs from a solution of lime or chloride of barium: if the precipitate from nitrate of silver be digested in strong ammonia, and nitric acid added to the filtered liquor, nothing is thrown down from it. From 100 grains, dissolved in water, 141 grains of iodide of silver are precipitated by nitrate of silver.” Used in scrofula, bronchitis, and various glandular diseases. Dose: 2 to 20 grains internally, and externally used in the form of ointment or lotion.

**POUDRE.**—(Hair Powder.) The bases are starch and oak-moss, alone or mixed, and scented at pleasure. From the perfume, the *poudre* takes various names, as poudre a la mareshalle, poudre de fleurs d'orange, poudre de jasmin, de jonquille, de rose, &c. It may be coloured at pleasure, and is frequently met with under the title of violet powder. Hair powder was fashionable at one period, but the unnatural appearance of the hair, combined with the tax levied on its advocates, have rendered it a usage of the olden time, of which there are now few examples.

**POUNCE.**—Powdered gum sandarac. Used to dust writing, in order to dry it. Another preparation called pounce, is the solution of carbonate of soda; used for marking-ink with preparation.

**POWDERS.**—“It is necessary that whatever we order to be reduced to powder should be passed through a fine sieve to separate the coarser parts and impurities, and it is desirable that most powders should not be long kept, but be recently prepared.”—*P. L.*

*Powder of Aloes, (Compound) L.*—Socotrine aloes, 1½ oz., guaiacum resin, 1 oz., compound powder of cinnamon, ½ oz. Rub the aloes and guaiacum separately to powder, then mix them with the cinnamon powder. Purgative, sudorific. Dose: 10 to 20 grains.

*Powder of Antimony, (Compound) L.*—Powdered ter-sulphuret of antimony, 1 lb., horn shavings, 2 lbs. Mix, and throw into a strongly heated crucible, stirring until vapour no longer arises. Powder the product, expose it to the heat of a fire, and keep it red hot for two hours, then rub it to fine powder. A very uncertain medicine in its effect. Dose: 3 to 10 grains.

*Powder of Chalk, (Compound) L.*—Prepared chalk, ½ lb., cinnamon, 4 oz., tormentil and acacia, of each 3 oz., long pepper, ½ oz.; powder the whole finely, and mix. Astringent, antacid. Used in diarrhoea. Dose: 10 to 40 grains.

*Powder of Chalk (Compound) with Opium, L.*—Compound chalk powder, 6½ oz., powdered opium, 4 scruples.

ples; mix. Astringent, anodyne. Dose: 10 to 30 grains.

*Powder of Cinnamon, (Compound) L.*—Cinnamon, 2 oz., cardamoms, 1½ oz., ginger, 1 oz., long pepper, ½ oz.; powder and mix. Aromatic, astringent. Dose; 10 to 20 grains.

*Powder of Ipecacuanha, (Compound) L.*—Ipecacuanha and opium, of each 1 drachm, sulphate of potash, 1 oz.; powder and mix. Diaphoretic, anodyne. Used to relieve dysentery and rheumatism. Dose: 2 to 5 grains in dysentery, and as a sudorific 10 to 15 grains. Any liquid, if taken *immediately after*, might cause nausea and vomiting, but to assist diaphoresis, a basin of hot gruel should be taken *one hour after the powder*.

*Powder of Jalap, (Compound) L.*—Jalap, 3 oz., bitartrate of potash, 6 oz., ginger, 2 drachms; powder and mix. Purgative. Dose: 20 to 40 grains.

*Powder of Kino, (Compound) L.*—Kino, 15 drachms, cinnamon, ½ oz., dried opium, 1 drachm; powder and mix. Astringent and aromatic. Dose: 5 to 20 grains in diarrhoea.

*Powder of Scammony, (Compound) L.*—Scammony and hard extract of jalap, each 2 oz., ginger, ½ oz.; powder and mix. Vermifuge, purgative. Dose: 10 to 20 grains.

*Powder of Tragacanth, (Compound) L.*—Tragacanth, acacia, and starch, of each 1½ oz., sugar, 3 oz.; powder and mix. Demulcent, emollient. Used in mixtures. Dose: 15 to 60 grains.

**PRADIER'S CATALPLASM.**—A celebrated recipe, for which the Emperor Napoleon gave £2,500. Balm of Mecca, 6 drachms, rectified spirit, 16 oz., dissolve; red bark, sarsaparilla, and sage, of each 1 oz., saffron, ½ oz., rectified spirit, 32 oz.; digest for 48 hours, filter; mix the two liquors, and add twice their weight of lime water. Used in gout, by sprinkling 2 oz. on the surface of a hot linseed-meal poultice.

**PREPARED VEGETABLE MEDICINES** are, in some instances, ordered to be used by the London College, as purer than the drugs which have undergone no preparation.

*Prepared Ammoniacum, L.*—Ammoniacum in tears, 1 lb., water sufficient to cover it; boil until they are mixed, strain through a hair sieve, and evaporate in a water bath so that it may solidify on cooling. This process removes seeds and stalks.

*Prepared Assafætida, L.*—Proceed as directed for prepared ammoniacum.

*Prepared Burgundy Pitch, L.*—Proceed as directed for prepared ammoniacum. The purification frees the pitch from the chips and twigs with which it is originally mixed.

*Prepared Cassia, L.*—Cassia broken longitudinally, 1 lb., distilled water sufficient to cover it; macerate for six hours with frequent stirring, strain the pulp through a hair sieve, and evaporate in a water bath to the consistence of a confection. This process clears the cassia from the pods and seeds.

*Prepared Frankincense, L.*—Frankincense, 1 lb., water sufficient to cover it. Boil the frankincense in the water, strain it through a hair sieve, and when cold pour off the water. The loose woody matter present in common frankincense is separated by this process.

*Prepared Galbanum, L.*—Proceed as directed for prepared ammoniacum.

*Prepared Prune, L.*—Prunes, 1 lb., water sufficient to cover the prunes. Boil gently for four hours, press the pulp through an open cane sieve, and afterwards through a fine hair sieve, then evaporate in a water bath to the consistence of a confection. The pulp alone comes through, clear of the skins and stones.

*Prepared Sagapenum, L.*—Proceed as directed for prepared ammoniacum.

*Prepared Storax, L.*—Storax, 1 lb., rectified spirit, 4 pints. Dissolve the storax in the spirit and strain through linen, then let the greater part of the spirit distil by a gentle heat, and evaporate what is left in a water bath to the proper consistence. Storax is insoluble in water, and in this process spirit is used as the purifying medium.

*Prepared Tamarind, L.*—Tamarind, 1 lb., water suffi-

cient to cover it. Macerate for four hours with a gentle heat, then proceed as for prepared prunes. Separates the stones and twigs.

PRINTING ROLLERS are made of treacle and glue, with sometimes a little Paris white, &c. The proportions are about  $\frac{1}{2}$  lb. of glue to  $1\frac{1}{4}$  lb. of treacle; the glue is broken to pieces, soaked for 24 hours in sufficient water, then melted with the treacle, and cast into a mould previously oiled. On removing the composition it forms a cylinder without a seam, elastic, like India-rubber, yet sufficiently soft to ink the type without injuring them. When it gets hard, which happens in 2 to 4 months, according to the weather, &c., it is necessary to re-melt it, adding a little more treacle. Used to ink the type for letter press. If the composition is too hard, the ink does not spread evenly, if too soft, pieces are torn away from the roller. When the printing is finished, the roller is rubbed over a sink stone with cold water, which dissolves a little of the external coat, and so leaves it clear of ink.

PRINTS, ACKERMANN'S LIQUOR FOR.—Best pale glue and white soap, of each 2 oz., hot water, 30 oz.; dissolve, and add powdered alum, 1 oz. Used as a size for prints before colouring them.

PRUSSIAN BLUE.—1. Mix alum, 2 parts, with sulphate of iron, 1 part, and add water sufficient to dissolve. Then make a solution of prussiate of potash, add to it a little sulphuric acid, and, when mixed, drop in the first solution until the precipitate falls slowly, when it will require washing on the filter, and drying.

2. *Turnbull's.*—Add a solution of protosulphate of iron to one of red prussiate of potash.

3. *Soluble.*—Make one solution of prussiate of potash, 2 oz., and another of protosulphate of iron, 1 oz., add this gradually to the first until the precipitate almost ceases to fall, then strain on linen, add water, and continue the washing until the blue colour begins to dissolve in it, when it may be at once dissolved in *distilled* water or dried. Or, add a solution of persulphate of iron to one of ferroprussiate of potash, and proceed as last.

4. Potash or pearlash, 2 parts, coke cinders or coals, 2 parts, iron turnings, 1 part. Powder the whole coarsely, roast it in an open crucible for half an hour, stirring occasionally, cool, and dissolve the soluble portion in a water filter; add 1 part of copperas and muriatic acid to brighten the colour. The product is a pure perferrocyanate of iron.—*Thompson.*

**PURPLE OF CASSIUS.**—Crystallized protochloride of tin, 1 part, crystallized perchloride of tin, 2 parts; make separate solutions, mix the liquors, and add in solution, 1 part of crystallized terechloride of gold; wash and dry the precipitate. Used to stain glass of a ruby colour, and to paint porcelain purple.

**PURIFIED GUM ARABIC.**—Gum, 1 part, strong and purified solution of sulphurous acid gas, 6 or 8 parts; preserve the mixture from the contact of air; and when the gum is dissolved, heat the liquid, pour it off warm into a receiver containing carbonate of baryta in excess. Filter the liquid, which is now a solution of pure gum, and evaporate.

**PUTTY.**—Whiting, well sifted, is mixed with boiled oil to a paste, which is then chopped in a putty-mill until well mixed. As soon as part of the putty is ready, it is withdrawn, and more paste added. When it is desired red, some Spanish brown is mixed with the paste to colour it.

**PYROLIGNEOUS ACID.**—A vinegar obtained by the destructive distillation of wood.

**PYROPHORUS.**—A term applied to those substances which inflame on exposure to air. They are never prepared except for experiment or curiosity. 1. Mix dried alum and brown sugar, equal parts, burn in a covered crucible until dry, bottle, and keep up the heat until flame ceases to rise, then cork close to cool.—*Homberg.* 2. Calcine tartar emetic in a similar manner, or tartrate of lead, (crystallized acetate of lead, 5 parts, tartaric acid, 2 parts; make separate solutions, mix the liquors, wash and dry the precipitate, which is tartrate of lead.) 3.

Lamp-black, 3 parts, dried alum, 4 parts, carbonate of potash, 8 parts; calcine.—*Hare.* 4. Sulphate of potash, 9 parts, calcined lamp-black, 5 parts.—*Gay Lussac.* 5. Sulphate of potash, 2 parts, lamp-black, 11 parts. 6. Alum, 3 parts, flour, 1 part. When any of these powders have been properly burned, a little of the composition inflames on exposure to the air, and more quickly if the atmosphere is damp, or the powder breathed upon.

QUATERON.—Four ounées.

QUEEN'S METAL.—Tin, 100 parts, antimony, 8 parts, copper, 4 parts, bismuth, 1 part; melt under charcoal. Used to make teapots, and other white metal articles. It is a description of pewter.

QUININE.—A white, bitter, odourless alkaloid; obtained from bark. It is not used in medicine, but several of its salts are employed as tonics and febrifuges.

QUININE, SULPHATE OF, *L.*—A crystallized salt, prepared from yellow bark. Soluble in water, especially if mixed with an acid. When ammonia is added, quina is thrown down, and on the liquor being evaporated, what remains ought not to taste of sugar. 100 grains of this salt lose 8 or 10 grains of water by a gentle heat. It is totally destroyed by fire. If recently prepared chlorine is added, and then ammonia, it turns green. By adding chloride of barium to 100 grains, dissolved in water mixed with hydrochloric acid, 26.6 grains of sulphate of barytes are obtained after it has been dried by being heated in a red fire. Disulphate of quinine is given in ague, rheumatism, and tic-doloreux, in which last it is especially useful, combined with sesquichloride of iron. (See Iron.) Its use should always be preceded with a purgative and emetic, if required; otherwise it will fail to do good, but will fur the tongue and disorder the stomach. Dose: 1 to 10 grains.

RADCLIFFE'S ELIXIR.—Aloes, 6 drachms, cinnamon, zedoary, and cochineal, of each  $\frac{1}{2}$  drachm, rhubarb, 1 drachm, buckthorn syrup, 2 oz., proof spirit, 1 pint,

water, 5 oz.; digest 7 days.—*Paris.* An aromatic stomachic and purgative. Dose: 1 to 4 drachms.

**RANCIDITY, TO REMOVE.**—Add a little nitric ether to the rancid oil. A few drops preserve oils and fats from turning.

**RATAFIA.**—Spirit sweetened and flavoured with fruit.

**RATS AND MICE** may be exterminated in various ways by using poisons; the chief objection against which is, that they retire to their holes to die, and the bodies putrefy unless removed, which causes, at times, great expense.

1. Boil 1 oz. of arsenic in half-a-pint of water for a few minutes, add lump sugar sufficient to sweeten the liquor, which must then be poured on 1 lb. of old bread, cut in squares. These must then be laid in places where the vermin can eat it; care must be taken to prevent accidents to children, &c.
2. Melt 2 lb. of suet, add 2 lb. of wheat flour, 3 oz. of arsenic,  $2\frac{1}{2}$  drachms of lamp black, and 15 drops of oil of aniseed. This composition is authorized by the Government of France.
3. Mix 1 quart of oatmeal, 2 oz. white sugar, oils of rhodium, caraway, and aniseed, of each 6 drops, musk,  $\frac{1}{4}$  grain; combine these without touching with the hands. Place this mixture for some nights where the rats can eat without disturbance; at the end of 6 nights, if they take it freely, add 1 teaspoonful of arsenic. What remains in the morning should be burnt, avoiding the fumes.—*Chemist, vol. 6.*
4. Feed as last for some nights, then add carbonate of barytes,  $\frac{1}{2}$  oz., to scented oatmeal, 4 oz., and leave it for 24 hours; afterwards burn the remainder.—*Taylor.*
5. Add nux vomica, 1 oz., to oatmeal, 1 lb., scent with aniseed and musk.
6. Melt phosphorus, 2 drachms, in water, 5 oz., by a gentle heat from hot water; pour the whole, when liquid, into a mortar; mix with rye meal, 5 oz., then add fresh butter, 5 oz., sugar, 4 oz., and mix.

7. Fresh butter, 4 oz., ealomel, 3 drachms, bread crumbs, 2 oz., sugar,  $\frac{1}{2}$  oz., oils of nutmeg and rhodium, of each 2 drops, oil of aniseed, 1 drop; mix. Used in hayricks, &c., by laying a lump on a stieck, and inserting it.
8. *Trap Baits.*—1. To the last, add 1 drop of oil of thyme. 2. Flour of malt, 4 oz., butter, sufficient to make a paste, add oil of aniseed, 2 drops, and bait the trap. Said to be very sueecssful.
9. Lay bird-lime in their haunts, and they will quit in disgust when it adheres to their furs.
10. On the side of a basin of water seeurely balance a stick, so that it will drop over the water with the weight of a mouse. Bait this end with cheese, tying it on, and lay a platform for the mice to aseend by.

**RECTIFICATION.**—The second distilling of a liquid to purify it.

**RED INK.**—Pernambueo wood, 4 oz., dilute aectie acid, 16 oz., water, 16 oz., boil down to 24 oz.; add 1 oz. of alum, evaporate to 16 oz.; add gum Arabie, 1 oz., strain, and, when eold, add protoehloride of tin, 1 drachm.—*Weber*.

**RELISH, KITCHENER's.**—Ground blaek pepper and salt, of each 1 oz., allspiee, horse-radish, and shalots, of each  $\frac{1}{2}$  oz., walnut pickle, or mushroom ketchup, 1 pint; infuse 14 days, and strain. Used as a sauce.

**RENNET.**—The stomach of a ealf washed elean, and preserved with brine or dry salt.

**RENNET, ESSENCE OF.**—Fresh rennet, 6 oz., salt and proof spirit, of each 2 oz., wine, 1 pint; digest 24 hours, and strain. Rennet and its essenee are both used to curdle milk, in preparing cheese. Very little suffees for this purpose. The dry rennet is almost invariably used in farm houses; the essenee very rarely.

**ROBERTS'S POOR MAN'S FRIEND.**—Chiefly nitrie oxide of mercurie.

**ROSE HAIR OIL.**—Take half a pint of fine olive oil, (salad oil,) and half an ounce of alkanet root; place them to-

gether in a bottle in a warm situation, there to remain for two or three days, giving the bottle a shake night and morning. When the oil is sufficiently rosy, which, in contact with the alkanet root, it soon becomes, it is to be strained through fine lawn, and any scent added to it that is preferred.

**ROSEMARY HAIR WASH.**—Rosemary water, 1 gallon, spirit, 10 oz., pearlash, 1 oz.

**ROUGE.**—Wash safflowers until the water comes away colourless, dry the flowers, powder them, and digest in a weak solution of carbonate of soda. Place some cotton wool at the bottom of the vessel, then add white vinegar till it ceases to produce a precipitate, wash the wool in cold water, dissolve the colour in a fresh solution of soda, add some finely-powdered French chalk, mix well, precipitate with vinegar as before, dry the powder carefully, and triturate it with a *little* olive oil, to render it smooth and adhesive.

**ROUGE, TOILET.**—Talc powder, coloured with carmine.

**ROUGE, JEWELLERS'.**—1. Dissolve sulphate of iron in hot water, add a solution of pearlash as long as any precipitate falls, wash this often with warm water, drain it, and calcine to a bright red colour. 2. Precipitate a dilute solution of sulphate of iron, with ammonia in excess, wash and express the precipitate, then calcine it to redness. Used as a polishing powder, and for covering razor strops.

**ROYAL PREVENTIVE.**—Diacetate of lead and proof spirit, of each 1 part, water, 20 parts. Used to prevent infection.

**RUM ETHER.**—Black oxide of manganese and sulphuric acid, of each 12 lbs., alcohol, 26 lbs., strong acetic acid, 10 lbs. Mix, and distil 12 pints. Used to give spirit the flavour of rum.

**RUPERT'S DROPS** are formed by dropping melted glass into cold water; they form pieces thick at one end, and tapering off to a point. The thick end will bear the blow

of a hammer without breaking, but if the narrow tail be broken off, the whole falls to powder with a smart shock to the holder, the effect arising from the hollow centre suddenly expanding.

**SACHETS** are dry substances enclosed in little bags, which are worn next the skin as medical agents.

*Sachets.*—Powdered orris, 2 lbs., rose leaves, 1 lb., tonquin beans, 8 oz., vanilla beans, 4 oz., musk,  $\frac{1}{4}$  oz., otto of almonds, 5 drops. Small bags, filled with this powder, are kept amongst clothes, to prevent moths and perfume linen.

**SACHET, ANTI-PHTHISIC.**—In 12 oz. of strong decoction of rue, dissolve 1 oz. of aloes, dip into this a piece of soft muslin, folded several times, and large enough to cover the chest and part of the stomach. Dry the muslin, and apply it over the chest. Used to prevent consumption.

**SAFFRON, L.**—The recent and dried corms of the wild herb. Let it be dug up in the month of July, or before the autumnal bud has projected. The dry coatings having been torn off, cut the cormus transversely in thin slices, and dry at first with a gentle heat, but afterwards slowly increased to the 150th degree.

“*The stigma* consists of tripartite filaments of an orange red colour, with the small filaments towards the apex dilated. Moistened with water, and bruised on white paper, it leaves an orange stain.”

There are two kinds, the hay and the cake saffron, the latter being frequently much adulterated. They are chiefly used as colouring ingredients. Saffron was formerly esteemed cordial and emmenagogue, and was ordered in some compounds for these qualities, but now is little used except for its tinge. It may be given in doses of 10 to 60 grains, in pill or powder, or made into an infusion.

**SAGO.**—A species of starch from the sago palm tree. For use, wash 1 oz. of sago, then boil it in 1 pint of clear water until combined, and flavour to taste with wine, sugar, spice, &c. It may be steeped before boiling.

SAL AMARUM.—Epsom salt.

SAL ERATUS.—Bicarbonate of potash.

SAL ESSENTIALE TARTARI.—Tartaric acid.

SAL TARTARI.—Bicarbonate of potash.

SALEP.—The prepared root of the orchis maseula, &c. Boil  $\frac{1}{2}$  oz. of the powder in 1 pint of water, and when dissolved, strain, sweeten, and flavour with wine, sugar, spice, &c.

SALOOP.—Sassafras tea, with milk and sugar. Used in rheumatism and skin diseases.

SALT, RED.—Colour common salt with an infusion of saffron, beet-root, or cochineal, or tincture of red sanders wood, or carmine, and dry it. Used to colour gravies. *Brown* salt is prepared with equal parts of browning and port wine.

SALT, SORE-THROAT.—Nitre melted and poured into moulds. Often called sal prunella.

SALTS, SMELLING.—1. Hydrochlorate of ammonia, 8 oz., carbonate of potash, 3 oz., essence of lemon and oil of cloves, of each 20 drops, oil of rosemary, 12 drops, oil of bergamotte, 10 drops, oil of cinnamon, 8 drops, camphor, 12 grains, musk, 1 grain, spirit of wine and strongest ammonia, of each  $\frac{1}{2}$  oz. Dissolve the camphor and oils in the spirit, mix the hydrochlorate and carbonate, first powdered separately, rub together, add the spirit, mix, and add the liquor ammoniæ, then fill the bottles immediately. 2. For the hydrochlorate, substitute the sesquicarbonate of ammonia, and proceed as before. Very powerful. 3. Sesquicarbonate of ammonia, 1 lb., oil of lavender, 3 oz., oil of verbena,  $\frac{1}{2}$  oz., strong solution of ammonia, 1 oz.; mix. See *Essence for smelling bottles*.

SALVE, LIP.—1. Spermaceti ointment, 3 oz., honey, 1 oz., mix, and scent if desired. 2. *Rose*. Spermaceti ointment, coloured with alkanet, and scented with otto. Or, oil of almonds, coloured with alkanet, 6 parts, white

WAX, 3 parts, spermaceti, 1 part, scent with otto. Used for chapped skin.

SARTAGINIS.—An iron pan.

SCAMMONY RESIN.—Add alcohol to the seammony, macerate for several days, decant; add fresh spirit to the residue, macerate for two days. Mix the spirits, allow the impurities to fall, decant the solution into cold water, and the resin will be precipitated. Wash it in fresh water, and evaporate until dry.

SCENT, POMATUM.—1. *Millefleur*. Essence of ambergris, 4 parts, essence of lemon, 3 parts, oils of cloves and lavender, of each 2 parts, essence of bergamotte, 1 part; mix. 2. *Cowslip*. Essence of bergamotte, 4 parts, essence of lemon, 2 parts, oil of cloves, 1 part; mix. 3. *Jonquille*. Essences of bergamotte and lemon, of each 8 parts, oil of cloves, 2 parts, oils of sassafras and orange, of each 1 part; mix. 4. See *Castor Oil Pomade*. 5. Oil of verbena and otto of roses, of each 5 drops, essence of sweet bean, 12 drops, rectified spirit, 1 oz.; mix.

SCHWARTZ' DROPS.—Barbadoes tar, 2 parts, tineturce of assafœtida, 3 parts; mix. Used for tapeworm. Dose: 40 drops 3 times daily.

SCHEELE'S GREEN (the arsenite of copper).—Arsenious acid, 11 oz., carbonate of potash, 2 lbs.; dissolve by heat in 1 gallon of water, filter, and add this gradually to a filtered solution of sulphate of copper, 2 lbs., water, 3 gallons. Wash, and dry the precipitate, which will weigh about 1½ lb. Used as a green colour in painting.

SCUDAMORE'S GOUT LOTION.—Camphor mixture, 5 oz., alcohol, 2 oz.; mix. Applied warm on linen rags.

SEDATIVE WATER.—Liquor of ammonia, (22° Baume,) 3½ oz., camphorated alcohol, 3 drachms, bay salt, 9 dr., water, 1 quart. Mix the spirit of camphor with the ammonia, mix the salt and water, pour off the clear water, and add the camphorated ammonia. For general

use, this preparation requires the addition of another quart of water; it is then used to bathe the chest, skin, &c., in cases of fever, inflammation, rheumatism, &c. It may be applied by compresses of cotton, removing these as a burning or smarting is felt. The parts should afterwards be rubbed with camphor cerate. Raspail states that in disorders of the chest this application of sedative water and camphor cerate on the back, between the shoulders, will point out by red spots the exact seat of disease, and that these spots will cease to appear as the cure advances.

**SEIDLITZ POWDERS (IN ONE PAPER).**—Bitartrate of soda, 2 parts, bicarbonate of soda, 1 part. Mix.

**SEL DE SEIGNETTE.**—Potassio-tartrate of soda.

**SEL VEGETAL.**—Tartrate of potash.

**SELENIUM**, a rare metal, discovered by Berzelius.—Mix sulphuret of selenium 1 part, binoxide of manganese, 8 parts, heat in a glass retort, and receive the product in water. Selenium is a reddish brown body, of imperfect metallic lustre, sp. gr. 4.3, melts at  $212^{\circ}$ , boils at  $650^{\circ}$ , insoluble in water, and when heated in the air, emits a peculiar disagreeable odour.

**SEPIA**, the ink of cuttle-fish.—Prepared for artists by boiling in alkali, precipitating with acid, then washing and drying the precipitate. A fine brown colour, used by artists to wash pictures, like Indian ink.

**SHOEMAKERS' BLACK** (a solution of green copperas.)—It is applied to leather to turn it black.

**SIGNATURES, COPIES OF.**—1. Write the name, sprinkle gum Arabic, in finest powder, on the wet ink, make a rim round, and pour in melted fusible alloy. This may be printed from at a copperplate press.

2. Write the name in copying ink, transfer it to a wood block, and let it be engraved as a wood-cut.

**SILICA**, a name applied to a composition for filling teeth, made of powdered porcelain, plaster of Paris, and iron

filings, equal parts, and mixed with thick mastic or copal varnish.

**SILICA**, the earthy base of flint.—Heat quartz to redness, plunge it in cold water, dry, and powder. This is insoluble; but if to 1 part 3 parts of carbonate of potash be added and fused, it forms *soluble glass*, which is used to cover wood, &c., and render it incombustible.

**SILVER**, a well-known white metal; very lustrous, malleable, ductile, and the best known conductor of heat and electricity. Pure silver has a sp. gr. of 10.5, melts at about  $1873^{\circ}$ , (Daniell,) and is soluble in nitric acid. It is not often used alone in the arts, but is generally alloyed with a little copper; for plate and coin, the proportions are, 11 oz. 2 dwt. of silver, to 18 dwt. of copper. It is employed for numerous purposes in domestic life, for lighthouse reflectors, filling teeth, (amalgamated with mercury,) and electrotyping inferior metals. The equivalent of silver is 108, its symbol Ag (argentum.) Some of its salts are used in medicine.

**SILVER, SOLDERS FOR.**—1. *Hardest*. Silver, 4 parts, copper, 1 part; fuse together. 2. *Hard*. Sterling silver, 3 parts, melt, add brass wire, 1 part. 3. *Soft*. Silver, 2 parts, melt, add brass wire, 1 part. This is generally used; some add a little arsenic, to make it whiter and more fusible, but it becomes less malleable, and more injurious. 4. Pure tin, or tin solder, (2 lead to 1 tin,) used for inferior works.

**SILVER, NITRATE OF, L.** (1836.)—Pure silver,  $1\frac{1}{2}$  oz., nitric acid, 1 oz., diluted with water, 2 oz.; heat by a sand-bath until ebullition ceases, and the water is expelled, then pour it into moulds. No formula is given in the P. L. for 1851, but the following characters and tests are to be observed:—“White, soluble in water, the solution precipitates silver when copper is immersed in it. If 17 grains of nitrate of silver are added to 6 grains of salt, dissolved in water, and to the filtered solution more nitrate be added, nothing further is thrown

down. This substance must be kept from the light." Used as a caustic externally, and internally as a tonic and astringent. In solution it must always be combined with *distilled* water, and never with impure water. Externally it is rubbed on the wetted skin, or applied in a lotion of 2 to 20 grains to each ounce of water. Internally it is given in the solid form, in doses of  $\frac{1}{6}$ th of a grain, gradually increased to 2 or 3 grains.

**SILVERING**, the art of coating substances with silver.—Leaf silvering may be performed as leaf gilding. See *Gilding, burnished*. Cold silvering may be performed on brass and copper which is well cleaned and quite bright, by rubbing with a moistened cloth, dipped in the following powder: 1. Chloride of silver, 2 parts, pearl-ash, 6 parts, salt, 3 parts, whiting, 2 parts; mix. Or, 2. Precipitated silver, 1 part, common salt and cream of tartar, each 2 parts; mix. When the metal is silvered, it should be washed in a hot weak solution of alkali, and then washed dry. Other silvering powders are: 3. Nitrate of silver and salt, of each 1 part, cream of tartar, 7 parts. 4. Nitrate of silver, 1 part, cyanide of potassium, 3 parts. 5. *Bath*. Nitrate of silver, 15 parts, sulphate of soda, 100 parts; dissolve in water, and dip the article into the solution.

**SILVERING, GLASS.**—See *Amalgams*. Mirrors are silvered by coating tin-foil with mercury, applying the mirror, and pressing together with weights to remove the superfluous mercury. The insides of globes are coated with the amalgam, rolling them about until every part is coated. DRAYTON's patent process is as follows: Mix nitrate of silver and liquor ammonia, of each 1 oz., water and rectified spirit, of each 3 oz.; let stand four hours, and filter. To each oz. add 2 drachms of sugar, dissolved in alcohol and water, equal parts; pour the mixture on the glass to be silvered, and keep up the heat of  $160^{\circ}$  until the silvering is completed. Besides sugar, there are other precipitants of the silver, as oils of cloves, cassia, caraway, or thyme, aldehyde, &c., and the solution of gun cotton in caustic potash. To this

last the nitrate is added in solution, and ammonia sufficient to redissolve the preeipitate; the solution, on being heated, deposits very brilliant silver.

**SIROP D'AMANDES.**—Sweet almonds, 1 lb., bitter almonds, 5 oz., white sugar, 6 lbs., water, 3 lbs. 4 oz., orange-flower water, 8 oz. Blaneh the almonds, and beat them into a fine paste in a stone mortar, with 4 oz. of water and 1 lb. of sugar. Mix this paste with the rest of the water, and press; add the remaining sugar, dissolving it by the heat of a water bath; then add the orange water, and strain through muslin.

**SIZE.**—The hides ealled *sizing* are prepared for size, by partly covering them with water in a tub, at the bottom of whieh a pipe gives off steam from a boiler. The steam, being turned on, heats and boils the size without danger of burning, and the proeess is continued until the whole is completely dissolved into a jelly. Alum is then added, to clear the size, and it is drawn off to eool. It may be prepared by boiling with water, but is more apt to burn, if not earefully attended to.

**SIZE, JAPANNERS' GOLD.**—Linseed oil, boiled with gum anime, and thinned, if required, with turpentine.—*Whittock.*

**SIZE, GOLD.**—1. Drying oil, ground with red lead. Inferior. 2. Boiled oil, 3 parts, japanner's gold size, 1 part; mix with yellow oehre, well ground, in boiled oil, to a sufficient thicknes. Superior quality.

**SMALTS**, a blue pigment prepared from cobalt. Used in painting, and to give linen a blue tinge.

**SOAP.**—The hard, or Castile soap, made of olive oil and soda, is now simply ealled soap in the P. L. The soft soap of medieine is made of olive oil and potash, and “in place of this, the eommon soft soap prepared from fish-oil, suet, and potash, should by no means be used,” L. The frequent use of hard soap in pills, &c., rendered them so hard as frequently to be ineffective; the soft soap is therefore now substituted for most preparations.

**SOAP (Brown).**—Tallow, 975 lbs., rosin, 325 lbs., soda ash, 4 cwt., water, q. s.

**White.**—Tallow, 13 cwt., soda ash, 4 cwt.

Boil the compound, and when the combination is complete, add a quantity of common salt. The soap separates, and floats on the surface, and may then be formed into wedges.

**SOAPS, FANCY**—consist of common commercial soap, mixed with scents and colours at pleasure. The regulations of the Excise prevent other than licensed manufacturers preparing ordinary soap, but this may be scented or mixed, and retailed by druggists, &c.

**Soap, Bitter Almond.**—Melt soap, 1 lb., with a little water, and when cooling, add oil of bitter almonds, 1 drachm.

**Soap, au Bouquet.**—Melt 7 lbs. of soap, and add essence of bergamotte, 1 oz., oils of cloves, sassafras, and thyme, of each 2 drachms.

**Soap, a la Rose.**—Melt 4 lbs. of olive oil soap, with 3 lbs. of tallow soap, adding a little water; when melted, add 1 drachm of vermillion; mix, cool, and add otto of roses, 3 drachms, essence of cloves and cinnamon, of each  $\frac{1}{2}$  drachm, bergamotte,  $2\frac{1}{2}$  drachms; mix.

**Soap, Floating.**—Melted soap and water are agitated until the soap largely increases in size, it is then scented, and poured into moulds to dry.

**Soap, Musk.**—Melt 1 lb. of soap, cool, add essence of musk,  $\frac{1}{2}$  drachm, bergamotte and ambergris, of each 20 drops.

**Soap, Transparent.**—Soap is dissolved in rectified spirit, and the clear portion moulded in squares. Not much used, does not lather well. May be perfumed at pleasure.

**Soap, Lady Derby's.**—See COSMETICS—*Almond Soap*.

**Soap, Windsor.**—Common soap, scented with caraway and bergamotte.

**Soap, Shaving.**—Mix  $1\frac{1}{2}$  lb. soap, carbonate of potash, 2 oz., and spirit of wine, 1 quart; digest until dissolved, filter, and scent with bergamotte, or essence of lemon. The product is an oily liquid.

*Soda*.—An alkali, resembling potash, but rather feebler. It forms many salts, some of which are used in medicine.]

*Soda, Borate of, L.*, is in crystals, soluble in boiling water; from this solution, when saturated and heated, sulphuric acid throws down colourless crystalline scales of boracic acid. Used mostly as a cooling lotion to the mouth, and as a cure for ringworm; for this last purpose, 1 part is dissolved in vinegar, 2 parts, and applied.

*Soda, Bicarbonate of, L.*.—Soluble in water, it slightly changes the colour of turmeric to brown. From this solution neither bichloride of platinum nor sulphate of magnesia throws anything down, unless heat be applied. What chloride of barium throws down is dissolved by hydrochloric acid; 100 grains of this substance, added to dilute sulphuric acid, evolve 51.7 grains of carbonic acid. Antacid. As an effervescent draught, 1 drachm may be added to tartaric acid, 18 grains, or lemon juice, 4½ drachms, with water, 4 oz.

*Soda, Phosphate of, L.*.—Crystallized, effloresces on exposure to air, soluble in water, the solution turns turmeric brown. Chloride of barium gives a white precipitate, which dissolves in nitric acid without effervescence; nitrate of silver gives a yellow precipitate, which is soluble in the same acid. At a red heat, 100 grains of this salt give off 62.3 grains of water. What is thrown down by nitrate of silver, from a solution of the remaining salt, is white. Mild laxative. Dose: 1 to 1½ oz. in broth or gruel.

*Soda, Potassio-tartrate of, L.*.—In crystals, soluble in water; the solution changes neither litmus nor turmeric. By adding sulphuric acid, bitartrate of potash is thrown down; from nitrate of silver, or chloride of barium, no precipitate results, or only what is soluble in more water. Mild cooling laxative, apt to gripe, if given alone. Dose: 2 to 8 drachms, in a suitable vehicle.

*Soda, Sulphate of, L.*.—In crystals, which powder on exposure to air, are soluble in water, the solution does not change litmus or turmeric. Nitrate of silver scarcely causes a precipitate in the dilute solution; at a high

temperature 100 grains evolve 55.5 grains of water. From 100 grains, dissolved in distilled water, on the addition of hydrochloric acid and chloride of barium, 71 grains of sulphate of baryta are obtained, by drying at a hot fire. Purgative. Us'd in fevers and inflammations. Dose:  $\frac{1}{2}$  to 2 oz.

**SODIUM.**—The base of soda. Anhydrous carbonate of soda, 6 parts, dissolve in a little hot water, mix with finely-powdered charcoal, 2 parts, lump charcoal, 1 part. Heat to whiteness in an iron retort, and receive the product in naphtha. Sodium is a silver-white metal resembling potassium, soft at ordinary temperatures, melts at  $194^{\circ}$ , and rapidly oxidizes; sp. gr. 0.972, being lighter than water. If thrown in water it decomposes it rapidly, in hot water it at once inflames, and leaves a solution of soda.—The equivalent of sodium is 23; its symbol is Na (natrium.)

**SOLDER.**—An alloy for the purpose of joining metals. Fine solder for copper, tin, &c., is tin 2 parts, lead 1 part, fused together. Common solders contain less tin; better solders contain silver, gold, &c.,

**SOLDERING LIQUID.**—Hydrochloric acid,  $\frac{1}{2}$  pint, granulated zinc,  $1\frac{1}{2}$  oz.; dissolve, and add some common solder and hydrochlorate of ammonia.

**SOLOMON'S BALM OF GILEAD.**—Compound tincture of cardamoms prepared with *brandy*, 1 pint, tincture of cantharides, 1 oz.; mix. The original was used in venereal cases. The proprietor, Dr. Solomon, acquired an immense fortune by its sale.

**SOLUTIONS** consist chiefly of soluble salts which are kept ready diluted to a certain strength, so as to save time in preparing prescriptions in which they may be ordered.

*Solution of Acetate of Ammonia, L.*—Dilute acetic acid, 1 pint, sesquicarbonate of ammonia, 9 drachms or a sufficient quantity. Add the ammonia until the acid is saturated.

*Characters and Tests, L.*—Without colour or smell. The

## SOLUTIONS.

sp. gr. is 1.022. It does not change the colour of turmeric or litmus. On the addition of hydrosulphuric acid it is not coloured, nor is anything thrown down on the addition of chloride of barium. What is thrown down by nitrate of silver is soluble in water, and particularly so in nitric acid. Ammoniacal vapours arise on the addition of potash, and acetous fumes are given off on the addition of sulphuric acid. On evaporating, the residue is destroyed by heat.

Sodurific, aperient, or diuretic, according to the dose. The ammonia should not predominate, as in some cases it would prove injurious, especially in eye-waters. Used in fevers, catarrh, and influenza. Dose: 5 to 12 drs.

As a collyrium, 1 oz. to 9 of water.

*Solution of Acetate of Morphia, L.*—Acetate of morphia, 4 drachms, acetic acid, 15 drops, distilled water, 1 pint, proof spirit,  $\frac{1}{2}$  pint; mix and dissolve. Anodyne, less exciting than opium. Dose: 8 to 20 drops.

*Solution of Alum (Compound,) L.*—Alum and sulphate of zinc, of each 1 oz. boiling water, 3 pints; dissolve and strain. Powerfully astringent. Used diluted as a lotion to old ulcers, as a collyrium, and as an injection in gonorrhœa or leucorrhœa.

*Solution of Ammonia, L.*—No directions are given in the Pharmacopeia for this or the next preparation.

*Characters and Tests, L.*—Free from colour, sp. gr. .960. Exposed to air it emits acrid alkaline fumes, which are evanescent, as shown by turmeric. Nothing is thrown down on the addition of lime water, it is not coloured by the addition of hydrosulphuric acid, nor when first saturated with nitric acid does it give any precipitate on the addition of sesquicarbonate of ammonia, nitrate of silver, or chloride of barium. 100 grains of the solution contain nearly 10 grains of ammonia.

*Solution of Ammonia, (Stronger) L. Characters and Tests.*—The sp. gr. is .882. It can be reduced to the standard of the weaker solution of ammonia, by the addition of 2 oz. of distilled water to each oz. of this solution. 100 grains of this contain nearly 30 grains of ammonia.

The strong solution of ammonia is vesicant, caustic, stimulant, and antispasmodic. Externally applied in its pure state it quickly reddens and inflames the skin, and acts as a blister, without causing strangury. Combined with emollient ingredients it assists in forming useful stimulating liniments for rheumatism, neuralgia, sprains, and bruises. When taken internally in large doses it acts as a powerful corrosive irritant. The pungent odour of its fumes will often assist in arousing patients who seem insensible from exhaustion, drunkenness, or fits; but the application should only be momentary, otherwise inflammation will ensue without any corresponding benefit. This solution is used to dissolve essential oils, and to fill the smelling bottles which are generally used on any sensation of heat, faintness, or headache. These are known as smelling salts. The weaker solution is often added to oil as a popular emulsion, known as hartshorn and oil, and internally is used as a medicine. Dose: 5 to 30 drops diluted in water or milk.

*Solution of Ammonio-Sulphate of Copper, L.*—Ammonio-sulphate of copper, 1 drachm, distilled water, 1 pint; dissolve and strain. Stimulant, detergent. Not used internally. Colour deep purplish blue while the ammonia is in excess, changing to light blue if decomposed by want of ammonia. Used as a test for arsenious acid, turning green when mixed with it, and as a wash for ulcerated surfaces.

*Solution of Arsenite of Potash, L.*—Arsenious acid in small pieces, and carbonate of potash, of each 80 grains, compound tincture of lavender, 5 drachms, distilled water, 1 pint. Boil the acid and potash with half-a-pint of water until dissolved. To the liquor when cold add the tincture, and make up exactly 1 pint with water. Each oz. contains 4 grains of arsenious acid. Used in agues and skin diseases. Dose: 3 to 10 drops by gradual increase, intermitting the dose when it causes pain in the stomach, headache, or symptoms of irritation. It must always be taken soon after a meal, as its effects are then milder.

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*Solution of Bichloride of Mercury, L.*—Biehloride of mercury and hydrochlorate of ammonia, of each 10 grs., distilled water, 1 pint; dissolve. Each fluid oz. contains  $\frac{1}{2}$  grain of bichloride of mercury. Poisonous in large doses, alterative in small quantity. Dose:  $\frac{1}{2}$  to 2 drachms, in water or some infusion or decoction. Externally applied as a lotion to eruptions and sores.

*Solution of Carbonate of Potash, L.*—Carbonate of potash, 20 oz., distilled water, 1 pint; dissolve and strain. Sp. gr. 1.473. Antaeid. Dose: 10 to 60 drops.

*Solution of Chloride of Arsenic, L.*—Arsenious acid in small pieces,  $\frac{1}{2}$  drachm, hydroehloric acid,  $1\frac{1}{2}$  drachm, distilled water, 1 pint. Mix the hydrochloric acid with 1 oz. of water, and boil the arsenious acid in it until dissolved; add water to make it measure 1 pint exactly. Each oz. contains  $1\frac{1}{2}$  grains of arsenious acid. Used in agues and skin diseases. Dose: 10 to 30 drops by gradual increase, to be taken after a meal.

*Solution of Chlorinated Soda, L.*—Carbonate of soda, 1 lb., distilled water, 48 oz., chloride of sodium, 4 oz., binoxide of manganese, 3 oz., sulphuric acid,  $2\frac{1}{2}$  oz. Dissolve the carbonate in 2 pints of water, then put the chloride and binoxide, rubbed to a powder, into a retort, add to them the acid, first mixed with 3 oz. of water, and cooled. Heat the mixture, and pass the chlorine first through 5 oz. of water, and afterwards into the solution of carbonate.

*Characters and Tests, L.*—The colour of turmeric is at first changed to brown when added to this solution, and soon after entirely disappears. On the addition of dilute hydrochloric acid, carbonic acid and chlorine are emitted together. It bleaches the solution of sulphate of indigo, and precipitates lime from lime-water.

Used as a disinfectant against foul effluvia; locally applied to cleanse ulcers and suppurating wounds, eruptions, or sores, as a gargle in ulcerated sore throat, as a wash in profuse salivation, as an injection when there is offensive discharge from the vagina or bladder. Internally, in low fever, it clears the tongue and corrects foul eva-

## SOLUTIONS.

cuations. Dose: 15 to 30 drops in water, externally, or as an injection, diluted with 15 times its weight of water.

*Solution of Citrate of Ammonia, L.*—Citric acid, 3 oz., distilled water, 1 pint, sesquicarbonate of ammonia,  $2\frac{1}{2}$  oz., or a sufficient quantity. Dissolve the acid in water, and add the sesquicarbonate to saturation. Uses similar to those of the solution of acetate of ammonia. Dose: 1 to 3 drachms.

*Solution of Diacetate of Lead, L.*—Acetate of lead, 2 lb. 3 oz.; oxide of lead in powder, 1 lb. 4 oz.; distilled water, 6 pints. Boil for 30 minutes, frequently stirring, and when the liquor is cold, add sufficient distilled water to make it 6 pints, then strain, and preserve it in well-closed bottles.

*Characters and Tests, L.*—Clear, sp. gr. 1.26. It corresponds with acetate of lead in the characters given, except the last.

Astringent, cooling, only used externally when diluted with water, as a collyrium, and to relieve inflammation. Combined with lard or cerate is applied as a dressing to irritable sores. Used also in a dilute state as an injection in gonorrhœa.

*Solution of Diacetate of Lead (diluted,) L.*—Solution of diacetate of lead,  $1\frac{1}{2}$  drachm, distilled water, 1 pint, proof spirit, 2 drachms; mix. Used externally only, and as an injection.

*Solution of Hydrochlorate of Morphia, L.*—Hydrochlorate of morphia, 4 drachms, distilled water, 1 pint, proof spirit,  $\frac{1}{2}$  pint; mix and dissolve. Anodyne, less exciting than opium. Dose: 8 to 20 drops.

*Solution of Iodide of Potassium (Compound,) L.*—Iodide of potassium, 10 grains, iodine, 5 grains, distilled water, 1 pint; mix and dissolve. Dose: 2 to 6 drachms, in bronchocele, &c.

*Solution of Potash, L.*—Carbonate of potash, 15 oz., lime, 8 oz., boiling distilled water, 1 gallon. Dissolve the carbonate in 4 pints of water, sprinkle a little water on the lime in an earthen vessel, and the lime being slacked,

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add the rest of the water. Mix the solutions in a close vessel immediately, and shake them until cold; let the carbonate of lime subside, and preserve the clear liquor in a green glass bottle.

*Characters and Tests, L.*—Sp. gr. 1.063. In 100 grains there are 6.7 grains of potash. Little or nothing is thrown down on the addition of lime-water, or if saturated with nitric acid by carbonate of soda, chloride of barium, or nitrate of silver. What is thrown down by bichloride of platinum is yellow. Antacid, alkaline, caustic. Dose: 10 to 30 drops. Used in dyspepsia, bladder complaints, leprosy and other skin diseases, &c.

*Solution of Sesquicarbonate of Ammonia, L.*—Sesquicarbonate of ammonia, 4 oz., distilled water, 1 pint; dissolve and strain. Dose: 10 to 60 drops in any bland vehicle. Stimulant, antacid.

*Solution of Soda, L.*—Carbonate of soda, 31 oz., lime, 9 oz., boiling distilled water, 1 gallon. Proceed as directed for solution of potash. Sp. gr. 1.061. In 100 grs. are contained 4 grains of soda. Its other characteristics correspond with those of solution of potash, the last excepted.

*Solution of Nitrate of Iron.*—Iron wire, in small pieces, 1 oz., nitric acid (s. gr. 1.42,) 3 oz., distilled water, q. s. Mix the acid, with 10 oz. of the water, in a thin, wide-mouthed flask, surrounded with water; add the iron gradually, filter the solution, heat it gently in a flask, and carefully drop in nitric acid, stirring frequently, until a drop of the solution, on being tested with ammonia, yields a clear red precipitate; then add distilled water, to make up 30 oz.—*Procter.*

**SOUP, PORTABLE.**—Prepared by boiling beef, &c., to a jelly with very little water. The jelly is spiced and flavoured to taste, and a little serves to enrich broth or make extemporaneous soup.

**SOY.**—The genuine is imported; that usually sold is an imitation. Boil one gallon of the seeds of dolichos, soja, peas or kidney-beans until soft, and bruised wheat, 1 gallon; keep it in a warm place 24 hours, and add salt, 1 gallon,

water, 2 gallons; bung in a stone jar for 3 months, express the liquor, and treat the residue with fresh salt and water for an inferior soy.

SPECIFIC, WORM.—Gamboge, 1 part, carbonate of potash, 2 parts; mix.—*Herrenschwand*.

SPECULUM METAL.—1. Copper, 64 parts, pure tin, 29 parts; melt separately under a little black flux, and mix. 2. Copper, 2 parts, pure tin, 1 part; mix as before. 3. Copper, 64 parts, tin, 29 to 33 parts; mix. 4. "Copper and tin are the best metals for reflecting telescopes, the best proportions being copper, 126·4 parts, tin, 58·9 parts."—*Earl of Rosse*. Sometimes a little arsenic is added to increase the whiteness. Used to make the reflecting mirrors of telescopes.

SPECULUM METAL.—Tin, 589 parts, copper, 1,264 parts.

SPICE, KIDDER'S SWEET.—Cloves, mace, nutmeg, cinnamon, and sugar, equal parts. Used in pastry.

SPICE, KIDDER'S SAVOURY.—Cloves, mace, nutmeg, pepper, and salt, equal parts. Used to spice meats, &c.

SPIELMAN'S CAMPHORATED VINEGAR.—Camphor, 30 grains, alcohol, 10 drops; mix and powder, add sugar, 1 oz., and distilled vinegar, 5 oz. Stimulant, in doses of 2 to 4 drachms.

SPIRITS are chiefly solutions in spirit of aromatic oils, or volatile ingredients, or else they are distilled from similar solutions.

*Spirit of Ammonia (Aromatic,) L.*—Hydrochlorate of ammonia, 6 oz., carbonate of potash, 10 oz., bruised cinnamon and bruised cloves, of each 2½ drachms, lemon-peel, 5 oz., rectified spirit and water, of each 4 pints. Mix and distil 6 pints. Sp. gr. ·918. Stimulant, antispasmodic, used in hysteria and fainting. Turns milky on the addition of water. Dose: ½ to 1 drachm.

*Spirit of Ammonia (Fetid,) L.*—Hydrochlorate of ammonia, 10 oz., carbonate of potash, 16 oz., rectified spirit and water, of each 3 pints, assafoetida, 5 oz. Mix, and slowly distil 3 pints. Sp. gr. ·861. Stimulant,

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antispasmodic, used in flatulent colic, hysteria, and as an enema. Dose:  $\frac{1}{2}$  to 1 drachm.

*Spirit of Aniseed, L.*—Oil of aniseed, 3 drachms, proof spirit, 1 gallon; dissolve. Stimulant, carminative in flatulent colic, wind, pain in the stomach and bowels, griping, &c. Dose:  $\frac{1}{2}$  to 2 drachms.

*Spirit of Camphor, L.*—Camphor, 5 oz., rectified spirit, 2 pints; dissolve. Stimulant. Used externally to bruises and sprains, and in liniments. Internally, to relieve pain and promote perspiration. Dose: 10 to 60 drops. Added to water it forms an extemporaneous camphor julep.

*Spirit of Caraway, L.*—Oil of caraway, 2 drachms, proof spirit, 1 gallon; dissolve. Carminative, stimulant. Dose;  $\frac{1}{2}$  to 2 drachms.

*Spirit of Cinnamon, L.*—Oil of cinnamon, 2 drachms, proof spirit, 1 gallon; dissolve. Stimulant, stomachic. Dose: 20 to 60 drops. Oil of cassia is generally substituted for that of cinnamon.

*Spirit of Ether (Compound,) L.*—Ether, 8 oz., rectified spirit, 16 oz., ethereal oil, 3 drachms; mix. Antispasmodic, stimulant. Used in fever, colic, hysteria, and spasmodic pains. Dose; 20 to 40 drops.

*Spirit of Horseradish (Compound,) L.*—Sliced horseradish, dried orange peel, of each 20 oz., bruised nutmegs, 5 drachms, proof spirit, 1 gallon, water, 2 pints. Mix, and slowly distil 1 gallon. Stimulant. Used in dropsies and as an antiscorbutic. Dose:  $\frac{1}{2}$  to 4 drachms.

*Spirit of Juniper (Compound,) L.*—Oil of juniper, 1 $\frac{1}{2}$  drachm, oil of caraway and oil of fennel, of each 12 drops, proof spirit, 1 gallon; mix. Diuretic, stimulant. Used in dropsies. Dose: 1 to 4 drachms, with diuretics.

*Spirit of Nitric Ether, L.*—Rectified spirit, 2 pints, nitric acid, 3 $\frac{1}{2}$  oz. Add the acid gradually to the spirit and mix, then let 28 oz. distil.

*Characters and Tests, L.*—Sp. gr. .834. It slightly changes the colour of litmus to red. On adding carbonate of soda no bubbles of carbonic acid escape.

## SPIRITS.

Diuretic, diaphoretic, refrigerant. Used in fever, dropsy, gonorrhœa, and strangury. Dose: 10 to 40 drops.

*Spirit of Nutmeg, L.*—Bruised nutmeg, 2½ oz., proof spirit, 1 gallon, water, 1 pint. Mix, and slowly distil 1 gallon. Aromatic, stimulant, carminative. Dose: ½ to 1 drachm.

*Spirit of Pennyroyal, L.*—Oil of pennyroyal, 3 drachms, proof spirit, 1 gallon; dissolve. Stimulant, carminative. Dose: ½ to 2 drachms.

*Spirit of Peppermint, L.*—Oil of peppermint, 3 drachms, proof spirit, 1 gallon; dissolve. Stimulant, carminative, cordial, stomachic. Dose: ½ to 2 drachms.

*Spirit of Pimento, L.*—Oil of pimento, 2 drachms, proof spirit, 1 gallon; dissolve. Aromatic, carminative. Used in flatulence or griping. Dose: ½ to 1 drachm.

*Spirit of Rosemary, L.*—Oil of rosemary, 2 drachms, rectified spirit, 1 gallon; dissolve. Applied locally to prevent baldness, and as an ingredient in stimulating liniments.

**SPONGE, PREPARED.**—Dip sponge into melted wax, and compress it between iron plates until cold. Used to make sponge tents.

**SPONGE, BLEACHED.**—Wash it in *weak* muriatic acid, then in cold water, soak it in a feeble sulphuric acid, wash in cold water, and lastly with rose or orange-flower water.

**SPONGE, BURNT.**—Prepared by burning sponge in a covered crucible. Formerly used in bronchocelc, but now generally superseded by iodine, its active ingredient.

**STANDERT'S MIXTURE FOR BOWEL COMPLAINT.**—Carbonate of magnesia, 1 oz., rhubarb, ½ oz., tincture of rhubarb, 3 oz., tincture of opium, 2 drachms, oil of aniseed, 30 drops, oil of peppermint, 30 drops, gin, 5 oz., water, 25 oz. Mix. Dose: one wineglassful.

**STIMULATING LINIMENT.**—Olive oil, 4 parts, liquor ammonia, 2 parts, turpentine, 2 parts, camphor, 1 part, alkanet root, q. s. Mix the turpentine and camphor, add

the remainder, and when the colour is bright, strain. An excellent external application for painful or sore parts, rheumatisms, pains, swellings, &c.

**STOMACHIC CANDY.**—Lump sugar, 1 lb., water, 3 oz.; dissolve by heat, and add cardamom seeds, ginger, and rhubarb, of each 1 oz.

**STOMACHIC LIQUEUR.**—Take tops and roots of angelica, 9 drachms, calamus aromaticus, 4 scruples, myrrh, cinnamon, of each 2 scruples, aloes, vanilla, cloves, of each 1 scruple, nutmeg, 5 grains, saffron, 1 grain. Digest the whole in one quart of good brandy for fifteen days, strain, add 1½ lb. of sugar, and bottle.

**STONE BLUE.**—Chinese blue, 4 parts by weight, Turnbull's blue, 1 part, oxalic acid, 1 part; mix; pour on boiling water until the whole is dissolved; add 1 part by measure, of sulphate of indigo (1 part indigo to 4 of acid,) and neutralize with carbonate of ammonia. Used to blue linen, &c., after washing.

**STRAW** is bleached by the vapours of sulphur, or a solution of oxalic acid or chloride of lime. It may be dyed with any liquid colour.

**STRYCHNIA, *L.***—The alkali prepared from *nux vomica*. “Crystals, soluble in boiling rectified spirit. It liquefies by heat, and if great it is destroyed. Its taste is most bitter. Being very powerful, it must be used most cautiously.” Strychnia is insoluble in alcohol and ether, but dissolves in dilute spirit, and in 7000 parts of water, which solution tastes intensely bitter. It is chiefly used in paralysis, but is employed in other disorders also. The dose is  $\frac{1}{10}$ th of a grain, cautiously increased to 1 grain. It is very poisonous, and no antidotes are known. The dose should be small from each fresh sample, as they differ considerably in strength.

**SUET.**—Prepared from the fat of the sheep, &c. Mutton suet is used as the basis of various plasters, ointments, &c.

**SUET, MELILOT.**—Suet, 4 parts, melilot leaves, 1 part; melt till crisp and strain. Used by farriers.

**SUGAR, ALUM.**—Powdered alum, white of egg and rose-water; mixed and shaped like sugar loaves. Used as an astringent.

**SUGAR, LEMON.**—Sugar, 2 lbs., tartaric acid,  $1\frac{1}{2}$  oz., essence of lemons, 1 drachm; mix. Used to make lemonade.

**SULPHUR** is chiefly used as an alterative and laxative, externally it is applied for the itch, and in this complaint it appears to have a specific influence. Dose:  $\frac{1}{2}$  to 3 drachms.

*Sulphur, Iodide of, L.*—Sulphur, 1 oz., iodine, 4 oz; put the sulphur in a glass vessel, and on it place the iodine, immerse the vessel in boiling water until they combine, cool, break the vessel, and preserve the contents in a well closed bottle. From 100 grains of this salt boiled in water, 20 grains of sulphur subside. Iodide of sulphur is not used internally; but in the form of ointment is used for skin eruptions.

*Sulphuretted Hydrogen.*—Sesquisulphuret of antimony, 1 part, muriatic acid, 5 parts; heat in a retort, and receive the gas over mercury. It is a colourless gas, having a strong putrid odour, which is most disagreeable when in small quantity; it burns with a blue flame. Sp. gr. 1.171, 100 cubic inches weigh 36.33 grains, at  $50^{\circ}$ , a pressure of 17 atmospheres liquefies it. Chlorine decomposes this gas, potassium burns in it with energy, 100 measures of it with 150 of oxygen explode with the electric spark, combustion ensues, and 100 measures of sulphurous acid gas result. Sulphuretted hydrogen is a valuable test for metals in solution, &c.; hence its own presence is easily detected by paper wetted with acetate of lead, which is immediately blackened.

*Sulphuric Acid, L.*—Free from colour and odour, sp. gr. 1.843; mixed with an equal measure of water, it usually throws down a white but scanty precipitate; it emits no vapour of nitrous acid. Diluted with 12 parts of water it gives no yellow precipitate on the addition of hydro-sulphuric acid. 100 grains of this acid are saturated by 285 grains of crystallized carbonate of soda.

Nordhausen sulphuric acid is prepared by distilling eal-

cined sulphate of iron in an earthen retort; the ordinary commercial acid is made by allowing the fumes of burning sulphur to come in contact with those of nitre and oil of vitriol. Concentrated sulphuric acid contains 40 parts acid to 9 parts water, it is a colourless oily liquid, of sp. gr. 1.85, acid taste and reaction. It freezes at 15°, at 620° it boils, and may be distilled without decomposition. When good, Nordhausen acid is distilled, anhydrous sulphuric acid comes over in solid crystals resembling asbestos. This deliquesces and fumes on exposure to air, melts at 66°, boils at 105°, sp. gr. 1.97, at 78° does not reddens litmus paper. It combines with water with a hissing like hot iron. Ordinary sulphuric acid, 4 parts by weight, at 50°, mixed suddenly with water, 1 part, at 50°, will rise to a temperature of 300°.

The acid of the shops, in its stronger form, is only used externally as a caustic, &c., internally it is a corrosive poison. The antidotes are chalk, magnesia, whiting, carbonate of soda, or potash, &c., &c.

*Sulphuric Acid, Dilute, L.*—Sulphuric acid, 15 drachms, distilled water, 1 pint. Add the acid by degrees to half a pint of the water, then make up one pint with more water. *Characters and Tests.*—Sp. gr. 1.103, one fluid ounce is saturated by 216 grains of crystallized carbonate of soda." Astringent, tonic, refrigerant. Used in fever, sweating, internal bleeding, lead colic, skin diseases, &c. Dose: 10 to 30 drops. Externally the stronger acid is used in ointment, with 4 to 8 times its weight of lard, for itch, &c.

*Sulphurous Acid.*—Heat 100 parts of black oxide of manganese with 14 parts of sulphur in a glass retort, and receive the product in water. Pure liquid sulphurous acid has a sp. gr. of 1.45, boils at 14° F., and causes great cold by its evaporation, and on exposure to air is decomposed. Used to bleach silks, &c., and to remove iron mould.

*SYDENHAM'S LENITIVE.*—Rhubarb, 3 drachms, coriander seeds and tamarinds, of each 2 oz., senna,  $\frac{1}{2}$  oz., boiling

water, 1 pint; macerate 3 hours and strain. Stomachic, laxative. Dose: 1 to 4 tablespoonfuls.

SYRUPS are solutions of sugar in water, either plain or medicated. "Syrups are to be kept where the heat never exceeds 55°."—L.

*Syrup of Buckthorn, L.*—Buckthorn juice, 4 pints, sliced ginger and bruised pimento, of each 6 drachms, sugar, 6 lb., rectified spirit, 6 oz. Let the dregs of the juice subside for 3 days, and strain the clear liquor; add to 1 pint the ginger and pimento, macerate with a gentle heat for 4 hours and strain, boil the remaining juice to 1½ pint, mix the liquors, add the sugar, and when cold add the spirit. Cathartic. Used for dropsies in robust patients. Dose: ½ to 1 oz.

*Syrup of Cochineal, L.*—Bruised cochineal, 4 scruples, boiling distilled water, 1 pint, sugar, 3 lbs., or a sufficient quantity, rectified spirit, 2½ oz., or a sufficient quantity. Boil the cochineal for 15 minutes in the water in a closed vessel, then strain; add to the liquor twice its weight of sugar, dissolve, and when cold, add to each oz. ½ drachm of spirit. Used to colour medicines.

*Syrup of Ginger.*—Sliced ginger, 2½ oz., boiling distilled water, 1 pint, sugar, 2½ lb. or a sufficient quantity, rectified spirit a sufficient quantity. Macerate the ginger in the water for 4 hours, press out the liquor, strain, and proceed as in syrup of cochineal.

*Syrup of Iodide of Iron, L.*—Iodine, 1 oz., iron wire, 3 drachms, distilled water, 12 oz., or a sufficient quantity, sugar, 10 oz. Mix the iodine and iron with 8 oz. of water, and heat until the solution assumes a greenish colour, then strain, evaporate to 4 oz., add the sugar, and when cold add water to make it 15 oz. Preserve it in a well closed black glass bottle. Tonic, alterative. Used in scrofulous affections and in chronic rheumatism. Dose: ½ to 1 drachm.

**SYRUP OF IODIDE OF IRON AND QUININE.**—Digest 1 drachm of iodine with ½ drachm of iron filings and 4 drachms of water, with a gentle heat and frequent agitation, till the solution is colourless; filter it rapidly into a bottle

## SYRUPS.

containing 28 oz. of syrup; dissolve 12 grains of sulphate of quinine in 2 drachms of water acidulated with sulphuric acid, and add to the former solution. Each ounce contains 3 grains of iodide of iron.—*Bouchardat.*

*Syrup of Lemon, L.*—Strained lemon juice, 1 pint, sugar,  $2\frac{1}{2}$  lb., rectified spirit,  $2\frac{1}{2}$  oz. Boil the juice for 10 minutes and strain, add the sugar and dissolve, when the syrup has cooled add the spirit. Used to communicate its flavour to medicines. The boiling and straining is intended to remove the mucus from the juice.

*Syrup of Marshmallow, L.*—Marshmallow root,  $1\frac{1}{2}$  oz., sugar, 4 lb. or sufficient, distilled water, 1 pint, rectified spirit,  $2\frac{1}{2}$  oz. or sufficient. Macerate the root in the water for 12 hours, express and strain the liquor, and proceed as for syrup of cochineal. Demulcent, used in cough mixtures. Dose: 1 to 4 drachms.

*Syrup of Mulberry, L.*—Strained mulberry juice, 1 pint, sugar,  $2\frac{1}{2}$  lb., rectified spirit,  $2\frac{1}{2}$  oz. or sufficient. Dissolve the sugar in the juice with a gentle heat, and in 24 hours remove the scum, pour off the clear liquor, and add the spirit. Used chiefly for its colour. Acid, refrigerant.

*Syrup of Orange, L.*—Dried orange peel,  $2\frac{1}{2}$  oz., boiling distilled water, 1 pint, sugar, 3 lb. or sufficient, rectified spirit,  $3\frac{1}{2}$  oz. or sufficient. Macerate the peel in the water for 12 hours in a covered vessel, express the liquid and boil it for 10 minutes, then strain, and proceed as for syrup of cochineal. Used only for its flavour, and as a stomachic.

*Syrup of Poppy, L.*—Bruised poppies without seeds, 3 lbs., sugar, 5 lbs., boiling distilled water, 5 gallons, rectified spirit, 5 oz. Boil the water and poppies to 2 gallons, express, strain, boil to 4 pints, and strain while hot. After 12 hours, boil the clear liquor to 2 pints, add the sugar, and when cold the spirit. Anodyne, sedative, less powerful than opium. Used in cough mixtures. Dose: 1 to 4 drachms.

**SYRUP OF PROTO-NITRATE OF IRON.**—Iron wire, in small pieces, 2 oz., nitric acid (sp. gr. 1.42,) 3 oz., water, 13 oz., sugar, 2 lbs. Pour on the iron 3 oz. of water, mix

## SYRUPS.

the aeid with the rest of the water, and pour gradually to the iron until the aeid is saturated, as shown by litmus paper; filter on the sugar, and make up, if requisite, to 30 oz., by pouring water on the filter. Strain, if neeessary; and seal the syrup in phials.—*Procter.*

*Syrup of Red Poppy, L.*—Red poppy petals, 1 lb., boiling distilled water, 1 pint, sugar, 3 lb. or suffieient, reetified spirit, 2½ oz. or suffieient. Heat the water in a water-bath, add the petals, frequently stirring, then maeerate without heat for 12 hours, press out the liquor with the hand, strain, and proeess as for syrup of eohineal.

*Syrup of Rose, L.*—Damask rose petals, 7 oz., sugar, 6 lb., boiling distilled water, 3 pints, reetified spirit, 5½ oz. Maeerate the petals in the water for 12 hours and strain, evaporate to 2 pints, and dissolve the sugar in the liquor; when eold, add the spirit.

*Syrup of Saffron, L.*—Saffron, 5 draehms, boiling distilled water, 1 pint, sugar, 3 lb. or suffieient, reetified spirit, 2½ oz., or suffieient. Macerate the saffron in the water for 12 hours in a closed vessel, strain and proeess as in syrup of eohineal. Used for its colour and flavour.

*Syrup of Sarsaparilla, L.*—Sarsaparilla, 3½ lb., distilled water, 3 gallons, sugar, 8 oz., reetified spirit, 2 oz. Boil the sarsaparilla in 2 gallons of water to one-half, and strain while hot. Boil it in the remaining water to one-half, and strain. Evaporate the mixed liquors to 2 pints, add the sugar, and when eold, the spirit. Tonie, alterative. Dose: 1 draehm or more.

*Syrup of Senna, L.*—Senna, 3½ oz., bruised fennel, 10 draehms, manna, 3 oz., boiling distilled water, 1 pint, treacle, 3 lb. Maeerate the fennel and the senna in the water with a gentle heat for 6 hours, express through linen, strain, and add the manna. Evaporate the treacle in a water bath until it beeomes almost solid on eooling, add to it while hot the liquor, and mix thoroughly. Purgative. Dose: 1 to 4 draehms.

*Syrup of Tolu, L.*—Balsam of tolu, 10 draehms, boiling distilled water, 1 pint, sugar, 2½ lb. Boil the water

and balsam in a closed vessel for 30 minutes, frequently stirring; when cold, strain the liquor and mix it with the sugar. Agreeable stimulant in cough mixtures. Dose: 20 to 60 drops.

*Syrup of Tolu.*—Tincture of tolu, 2 oz., carbonate of magnesia, 2 drachms, sugar, 24 oz. (av.,) water, 12 oz. Rub the tincture with the magnesia and 2 oz. of the sugar, gradually add the water, and filter. Dissolve the remainder of the sugar in the water by a gentle heat. Syrup of ginger may be obtained in the same manner.—*Finley.*

*Syrup of Violets, L.*—Violets, 9 oz., boiling distilled water, 1 pint, sugar, 3 lb. or sufficient, rectified spirit, 2½ oz., or sufficient. Macerate the violets in the water for 12 hours, express and strain; let the dregs subside, and proceed as for syrup of cochinchinal. Laxative to infants.

*Syrup, L.*—Sugar, 3 lb., distilled water, 1 pint; dissolve with a gentle heat. Used to sweeten mixtures, and to cause pill masses to adhere.

**SWEET OIL.**—Rape oil.

**TALEOLAS SCISSA.**—Cut like jujubes.

**TANNIC ACID, L.**—Almost colourless. Dissolved in water it is powerfully astringent; from a solution of isinglass it throws down a white precipitate, in other respects it resembles gallic acid. Astringent. Used in the sweating and looseness of phthisis. Dose: 2 to 5 grains in pills.

**TAR** was at one time extolled highly for its medicinal virtues, it is now little used, except for lepra and psoriasis. Pitch is the residue of tar, boiled to dryness, its uses are similar, and it is a good medicine for piles. Dose of tar or pitch 10 to 20 grains 2 or 3 times a day in pill, with half its weight of gum acacia.

*Barbadoes Tar* (petroleum) has similar uses, its dose is 5 to 30 grains.

**TARTARIC ACID, L.**—Is prepared from bitartrate of potash. Crystalline, free from colour, almost entirely decomposed

by fire, soluble in water; this solution throws down bitartrate of potash from any neutral salt of potash. Chloride of barium throws nothing down from this solution, what is thrown down by acetate of lead is soluble in nitric acid. 100 grains of this acid dissolved in water are saturated by 192 grains of crystallized carbonate of soda. Refrigerant and laxative. It is less efficacious in seury than lemon-juice or citric acid, and it is not so suitable as these for mixing with bicarbonate of potash. It is usually taken in effervescent draughts; 1 oz. of tartaric acid at a dose has in one case caused death.

**TARTARUS BORAXATUS.**—Soluble cream of tartar.

**TARTARUS DEPURATUS.**—Cream of tartar.

**TARTARUS TARTARISATUS.**—Tartrate of potash.

**TAYLOR'S SOLUTION.**—Nitrate of silver, 1 part, distilled water, 12 parts. Dissolve; and add gradually strong liquor of ammonia, until the precipitate at first produced is *just* redissolved. Used for copying negative pictures.

**TEA** is often largely adulterated. Grocers *rounce* their tea by agitation with calcined magnesia, this imparts a bloom, but injures the solvent powers of the water. Pure tea is not turned black by cold infusion in water, containing sulphuretted hydrogen gas, nor does it turn hartshorn spirit blue. The amber colour of the infusion is not reddened by adding a few drops of oil of vitriol.

**TEETH, THE.**—Are best preserved by cleanliness. Too much friction is injurious, neglecting them is often the cause of tartar accumulating; to prevent this, various powders and tinctures are used. See Index.

**TEETH, CEMENT FOR.**—Mastic, 90 parts, ether, 40 parts; dissolve, and add alum sufficient to form a mass. Mix tincture of camphor, 2 parts, with essence of cloves, 1 part; add 6 parts of the above mass, and apply to the tooth.—*Bernoth.*

**TERRA FOLIATA TARTARI.**—Acetate of potash.

**TERRA FOLIATA TARTARI CRYSTALLISATA.**—Acetate of soda.

**TEST FOR ESSENTIAL OILS.**—Add dry acetate of potash. If alcohol be present, the salt is dissolved, but not otherwise.

**THRIDACE.**—Extract of lettuce.

**TIN.**—A well known white metal. Pure tin is soft, malleable, sp. gr. 7.3, melts at 442°, dissolves in hydrochloric acid. Its white oxide is used as a polishing medium, under the name of putty powder. Tin filings are used occasionally as a vermifuge, in doses of 1 to 3 drachms for two or three mornings, followed by a purgative. Their action is supposed to be purely mechanical.

**TINCTURES** are spirituous solutions of various substances which may be conveniently administered in this form.

“All tinctures should be prepared in close glass vessels, and frequently shaken during maceration.”—*P. L.*

*Tincture of Aconite, L.*—Aconite root, coarsely powdered, 15 oz., rectified spirit, 2 pints. Macerate for 7 days, press, and filter. Anodyne and sedative in neuralgia, gout, rheumatism, &c.; when diluted is used as an embrocation in these disorders. Dose: 3 to 10 drops internally. In moderate quantity aconite acts as a powerful poison.

*Tincture of Aloes, L.*—Socotrine, or hepatic aloes in coarse powder, 1 oz., extract of liquorice, 3 oz., rectified spirit, 10 oz., distilled water, 30 oz. Macerate the aloes in the mixed spirit and water for 7 days, then add the liquorice, and when it is dissolved, strain. Dose:  $\frac{1}{2}$  oz., to 1 oz.

*Tincture of Aloes (Compound,) L.*—Socotrine or hepatic aloes in coarse powder, 4 oz., saffron, 2 oz., tincture of myrrh, 2 pints. Macerate for 7 days, and strain. Purgative, stimulant, and stomachic. Dose: 1 to 2 drachms.

*Tincture of Ammonia (Compound,) L.*—Mastic, 2 drachms, rectified spirit, 9 drachms, oil of lavender, 14 drops, stronger solution of ammonia, 1 pint. Dissolve the mastic in the spirit, pour off the clear tincture, and add the remaining ingredients. A milky compound, antispasmodic and stimulant, used in hysteria. Dose: 10 to 40 drops.

*Tincture of Ammonio-Chloride of Iron, L.*—Ammonio-

## TINCTURES.

chloride of iron, 4 oz., proof spirit and distilled water, of each 1 pint. Dissolve and strain. Dose: 30 drops to 2 drachms, as a tonic.

*Tincture of Assafætida, L.*—Assafætida, in small pieces, 5 oz., rectified spirit, 2 pints. Macerate for 7 days, and strain. Stimulant and antispasmodic. Employed in hysteria, flatulency, colic, &c. Dose:  $\frac{1}{2}$  to 1  $\frac{1}{2}$  drachms in pennyroyal water, or otherwise.

*Tincture of Belladonna, L.*—Dried belladonna, 4 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Dose: 2 to 4 drops. Mixed also with soap liniment as an anodyne application externally.

*Tincture of Benzoin (Compound,) L.*—Benzoin in coarse powder, 3  $\frac{1}{2}$  oz., prepared storax, 2  $\frac{1}{2}$  oz., balsam of tolu, 10 drachms, Socotrine or hepatic aloes in coarse powder, 5 drachms, rectified spirit, 2 pints. Macerate for 7 days, and strain. Used in cases of chronic cough. Dose: 20 drops to 1 drachm. Externally applied to rough ragged cuts. This tincture does not readily unite with mucilage or water, but will mix easily with treacle and water.

*Tincture of Calumba, L.*—Calumba thinly sliced, 3 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Aromatic, tonic. Dose: 1 to 2 drachms, with soda, iron, or chalybeates.

*Tincture of Camphor (Compound,) L.*—Camphor, 2  $\frac{1}{2}$  scruples, powdered opium, benzoic acid, of each 72 grains, oil of aniseed, 1 drachm, proof spirit, 2 pints. Macerate for 7 days, strain. Used chiefly to allay coughs. Dose:  $\frac{1}{2}$  to 2 drachms. Each ounce contains about two grains of opium.

*Tincture of Cantharides, L.*—Cantharides bruised,  $\frac{1}{2}$  oz., proof spirit, 2 pints. Macerate 6 or 7 days, express, and strain. Stimulant, diuretic, must be used with caution. Dose: 10 drops, gradually increased to 1 drachm, given in any mucilaginous fluid. Externally used, combined with compound camphor liniment, as a rubefacient in rheumatism, frost-bites, or unbroken chil-blains. An ingredient in remedies for baldness.

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*Tincture of Capsicum, L.*—Capsicum bruised, 10 drachms, proof spirit, 2 pints. Macerate for 7 days, press, and strain. Dose: 10 to 60 drops, in scarlet fever, ulcerated sore throat, and to induce perspiration. It is also used as a gargle in sore throat, &c.

*Tincture of Cardamom (Compound,) L.*—Cardamoms, caraway, and cochineal, all bruised, of each 2½ drachms, cinnamon bruised, 5 drachms, stoned raisins, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Aromatic, stimulant, cordial. Dose: 1 to 4 drachms. Chiefly used to flavour and colour mixtures.

*Tincture of Cascarilla, L.*—Cascarilla bruised, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Tonic, stomachic, employed in mixtures. Dose: 1 to 2 drachms.

*Tincture of Castor, L.*—Bruised castor, 2½ oz., rectified spirit, 2 pints, macerate for 7 days, express, and strain. Dose: 20 drops to 2 drachms, as an antispasmodic in hysteria, &c.

*Tincture of Catechu (Compound,) L.*—Powdered catechu, 3½ oz., bruised cinnamon, 2½ oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Astringent. Dose: 1 to 2 drachms in diarrhoea, combined with chalk.

*Tincture of Cinchona, L.*—Yellow cinchona bruised, 8 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Tonic, stomachic. Chiefly used as an adjunct to infusion of cinchona or mixtures. Dose: 1 to 3 drachms.

*Tincture of Cinchona (Compound,) L.*—Pale cinchona bruised, 4 oz., dried orange-peel, 3 oz., serpentary bruised, 6 drachms, saffron, 2 drachms, bruised cochineal, 1 drachm, proof spirit, 2 pints. Macerate for 7 days, express, and strain. Tonic, stomachic. Dose: 1 to 3 drachms.

*Tincture of Pale Cinchona, L.*—Prepared and used as tincture of cinchona.

*Tincture of Cinnamon, L.*—Cinnamon bruised, 3½ oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Cordial, aromatic, and stomachic. Dose: 1 to 4 drachms.

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*Tincture of Cinnamon (Compound,) L.*—Bruised cinnamon, 1 oz., bruised cardamom,  $\frac{1}{2}$  oz., long pepper powdered, and bruised ginger, of each  $2\frac{1}{2}$  drachms, proof spirit, 2 pints. Macerate for 7 days, express, and strain. Dose: 1 to 2 drachms. Cordial and aromatic.

*Tincture of Colchicum, L.*—Seeds of meadow saffron bruised, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Dose: 20 drops to 2 drachms in gout, or rheumatism.

*Tincture of Colchicum (Compound,) L.*—Meadow saffron seeds bruised, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Dose:  $\frac{1}{2}$  to 1 drachm, in gout.

*Tincture of Cubeb, L.*—Cubeb bruised, 1 lb., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Dose: 1 to 2 drachms, thrice a-day, in gonorrhœa and diseases of the urinary organs.

*Tincture of Ergot (Ethereal,) L.*—Ergot bruised, 15 oz., ether, 2 pints. Macerate for 7 days, express, and strain. Dose: 30 to 60 drops every half hour, to excite uterine action in labour, or to check sudden hemorrhage in that organ.

*Tincture of Foxglove, L.*—Dried foxglove leaves, 4 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Dose: 10 to 60 drops, in dropsy or asthma. Sedative, diuretic, and narcotic.

*Tincture of Galls, L.*—Bruised galls, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Astringent. Dose:  $\frac{1}{2}$  to 2 drachms. Chiefly used as a test for iron, and as an ingredient in astringent gargles.

*Tincture of Gentian (Compound,) L.*—Gentian sliced,  $2\frac{1}{2}$  oz., dried orange-peel, 10 drachms, cardamom bruised, 5 drachms, proof spirit, 2 pints. Macerate for 7 days, express, and strain. Bitter tonic and stomachic. Dose:  $\frac{1}{2}$  to 2 drachms.

*Tincture of Ginger, L.*—Bruised ginger,  $2\frac{1}{2}$  oz., rectified spirit, 2 pints. Macerate for 7 days, express, and strain. Stimulant, carminative. Dose: 1 to 2 drachms.

*Tincture of Guaiacum, L.*—Guaiacum resin in fine powder, 8 oz., rectified spirit, 2 pints. Macerate for 14 days,

## TINCTURES.

strain, express, and filter. Stimulant, diaphoretic.  
Dose: 1 to 3 drachms, in rheumatism or gout.

*Tincture of Guaiacum (Compound,) L.*—Guaiacum in coarse powder, 7 oz., aromatic spirit of ammonia, 2 pints. Macerate for 7 days, and strain. Stimulant, diaphoretic, and emmenagogue. Used in chronic rheumatism and gout. Dose:  $\frac{1}{2}$  to 1 drachm.

*Tincture of Hellebore, L.*—Black hellebore bruised, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Emmenagogue. Dose:  $\frac{1}{2}$  to 1 drachm.

*Tincture of Hemlock, L.*—Dried hemlock leaves, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Deobstruent and narcotic. Dose: 20 to 60 drops.

*Tincture of Henbane, L.*—Prepared as tincture of hemlock. Narcotic, anodyne. Dose: 15 to 60 drops.

*Tincture of Hops, L.*—Hops, 6 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Bitter stomachic. Dose:  $\frac{1}{2}$  to 2 drachms.

*Tincture of Iodine (Compound,) L.*—Iodine, 1 oz., iodide of potassium, 2 oz., rectified spirit, 2 pints. Macerate until dissolved, and strain. Dose: 10 to 60 drops.

*Tincture of Jalap, L.*—Jalap coarsely powdered, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Purgative, cathartic. Dose: 1 to 4 drachms. Used chiefly in combination with other medicines.

*Tincture of Kino, L.*—Powdered kino,  $3\frac{1}{2}$  oz., rectified spirit, 2 pints. Macerate for 7 days, and strain. Astringent. Dose: 1 to 2 drachms, generally combined with chalk.

*Tincture of Lavender (Compound,) L.*—Oil of lavender,  $1\frac{1}{2}$  drachms, oil of rosemary, 10 drops, cinnamon and nutmeg bruised, of each  $2\frac{1}{2}$  drachms, red sanders sliced, 5 drachms, rectified spirit, 2 pints. Macerate the cinnamon, nutmeg, and sanders in the spirit for 7 days, press, strain, and add the oils. Dose:  $\frac{1}{2}$  to 2 drachms, in lowness of spirits, flatulence, hysteria, or faintness.

*Tincture of Lemons, L.*—Fresh lemon-peel,  $3\frac{1}{2}$  oz., proof spirit, 2 pints. Macerate for 7 days, press, and strain. Dose:  $\frac{1}{2}$  to 2 drachms, to flavour other medicines.

## TINCTURES.

*Tincture of Lobelia, L.*—Lobelia powdered, 5 oz., proof spirit, 2 pints. Macerate for 7 days, press, and strain.

Dose: 15 to 30 drops, in cough, asthma, and bronchitis.

*Tincture of Lobelia (Ethereal,) L.*—Lobelia powdered, 5 oz., ether, 14 oz., rectified spirit, 26 oz. Macerate for 7 days, press, and strain. Dose: 15 to 40 drops, in cough, asthma, and bronchitis.

*Tincture of Myrrh, L.*—Powdered myrrh, 3 oz., rectified spirit, 2 pints. Macerate for 7 days, and strain. Stimulant, tonic, antiseptic. Dose: 20 to 60 drops. Seldom administered alone, but chiefly used as a dentifrice, and as an application to fresh cuts.

*Tincture of Opium, L.*—Powdered opium, 3 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Dose: from 2 drops to 1 or 2 drachms. One grain of opium is contained in 19 drops. Anodyne, astringent, sedative.

*Tincture of Orange (Peel,) L.*—Dried orange-peel, 3½ oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Bitter stomachic. Mostly used in conjunction with mixtures. Dose: 1 to 2 drachms.

*Tincture of Orris.*—Bruised orris-root, 7 lbs., rectified spirit, 1 gallon. Let stand 14 days, and strain.

*Tincture of Quinine (Compound,) L.*—Disulphate of quinine, 5 drachms and 1 seruple, tincture of orange, 2 pints. Digest until the quinine is dissolved, and strain. The quantity of quinine ordered is too great for the spirit to dissolve, unless sulphuric acid is added. If all the quinine is taken up, each drachm of tincture equals 1 grain of quinine. Dose: 15 to 60 drops.

*Tincture of Rhubarb (Compound,) L.*—Rhubarb sliced, 2½ oz., fresh liquorice bruised, 6 drachms, ginger bruised, and saffron, of each 3 drachms, proof spirit, 2 pints. Macerate for 7 days, press, and strain. Dose: 1 to 3 drachms as a stomachic, as a purgative, ½ to 1 oz. Used in cholic and diarrhoea.

*Tincture of Senna (Compound,) L.*—Senna, 3½ oz., caraway bruised, 3½ drachms, cardamom bruised, 1 drachm, raisins stoned, 5 oz., proof spirit, 2 pints. Macerate

## TINCTURES.

for 7 days, express, and strain. Stomachic, purgative. Dose:  $\frac{1}{2}$  to 1 oz., or, if in combination with other mixtures, 1 to 2 drachms.

*Tincture of Serpentine, L.*—Serpentine bruised, 3  $\frac{1}{2}$  oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Stimulant, diaphoretic. Dose:  $\frac{1}{2}$  to 2 drachms.

*Tincture of Sesquichloride of Iron, L.*—Sesquioxide of iron, 6 oz., hydrochloric acid, 20 oz., rectified spirit, 3 pints. Mix the iron and acid by the heat of a sand-bath, shaking frequently until dissolved. When cool, add the spirit and filter. Dose: 10 to 30 drops, generally in mixtures. All preparations of cinnamon or of bitters, except quassia and calumba, are incompatible with this tincture.

*Tincture of Squills, L.*—Recently dried squill, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Expectorant and diuretic. Dose: 10 to 30 drops, in coughs, and bronchial affections. Not suitable for children.

*Tincture of Sumbul.*—Sumbul, 2 oz., proof spirit, 16 oz. Macerate for seven days, and strain.

*Tincture of Tolu, L.*—Balsam of tolu, 2 oz., rectified spirit, 2 pints. Macerate until the balsam is liquefied, and strain. Stimulant, expectorant. Dose: 15 to 30 drops. Mixes with treacle and water, but not with muelilage. Used chiefly in pectoral mixtures.

*Tincture of Valerian, L.*—Valerian bruised, 5 oz., proof spirit, 2 pints. Macerate for 7 days, express, and strain. Antispasmodic, tonic. Dose: 30 to 60 drops.

*Tincture of Valerian (Compound,) L.*—Valerian bruised, 5 oz., aromatic spirit of ammonia, 2 pints. Macerate for 7 days, express and strain. Dose and uses as last.

**TINCTURA MECONII.**—Tincture of opium.

**TINCTURA THIEBAICA.**—Tincture of opium.

**TONQUIN REMEDY.**—Valerian, 20 grains, musk, 16 grains, camphor, 6 grains; mix. Antispasmodic. Used in hooping-cough (6 to 12 grains,) hydrophobia, and mania, 2 seruples to 1 drachm.

**TOOTHACHE.**—The remedies for this pain must vary according to the causes. When it arises from a foul stomach, a brisk purgative will often cure; if from cold, anodynes are applied; if from decay, caustics may be tried, but extraction is the grand remedy. In the early decay of teeth, a gold filling should be at once resorted to, and an able dentist employed. When a gum-boil arises, toasted figs applied to it assist it in coming to a head and suppurating. Toothache anodynes are numerous; the following may serve as specimens:—

1. Pellitory,  $\frac{1}{2}$  oz., camphor, 3 drachms, opium, 1 drachm, oil of cloves,  $\frac{1}{2}$  drachm, rectified spirit, 6 oz.; digest 10 days, and strain.—*Brande.*
2. Tincture of opium,  $\frac{1}{2}$  oz., camphor, 1 drachm; dissolve, and add oil of cloves, 20 drops. Generally effectual.
3. Creosote, 1 drachm, tincture of opium, 2 drachms, tincture of camphor, 1 drachm.
4. Camphor, 2 drachms, chloroform, 1 drachm, tincture of opium,  $\frac{1}{2}$  drachm.
5. Oil of rosemary, 2 parts, tincture of galbanum, 1 part; mix. Apply to the affected side, in the ear, on cotton.
6. Tannin, 20 grains, mastic, 5 grains, ether, 2 drachms.  
—*Mr. Druitt.*
7. Mastic or copal dissolved in chloroform.
8. A popular, and sometimes very effectual, remedy is the henbane fumigation. Henbane seed is thrown on hot cinders on a shovel, and a cup at once placed over it; on removing the cup, smoke is only apparent. Hot water is poured in to half-fill the cup, and the patient inhales the vapour near the affected side. Frequently relief is produced, but it fails in various cases.
9. Apply a little acetate of muriate of morphia on cotton wool.

**TOOTHACHE TINCTURE.**—Tincture of myrrh, 6 drops, tincture of benzoin (comp.,) 12 drops, muriatic acid, 18 drops. Mix.

**TOOTH POWDER.**—Sugar of milk, 1,000 parts, pure tannin, 15 parts, lake, 10 parts, oils of mint, aniseed, and orange-flowers, q. s. Rub together the lake and tannin,

gradually add the sugar of milk, and then the oils.—*Mialhe.*

**TREACLE, GERMAN.**—An evaporated cold infusion of juniper berries.

**TRIPLE EXTRACT OF ROSES.**—Otto of roses, 3 oz., rectified aleohol, 1 gallon.

**TURPENTINE, OIL OF,** is employed as an anthelmintie, purgative, stimulant, rubefacient, &c. Externally, it is employed alone or in liniments. Dose: from 10 drops to 2 oz., according to the object in view.

**TURPENTINE, CHIO,** according to the P. L., is an oleo-resin flowing from the incised trunk of the pistachia terebinthus, but the article sold under this name is almost invariably fictitious. Rosin and Canada balsam in equal parts are employed, with or without a little oil of fennel or juniper.

**TURPENTINE, VENICE,** cannot be obtained genuine in most cases. The imitation of it is made of rosin, to each pound of which 5 or 6 oz. of oil of turpentine is added, and combined by heat.

**TUTTY,** the sublimate of zinc. Used as an astringent in eye waters and ointments.

**ULTRAMARINE** is prepared from the lapis lazuli, and is a very expensive pigment. It is artificially imitated in various ways on the large scale, and a good ultramarine for common use is now sold at 3d. per oz., while the original colour brought from two to four guineas for the same quantity.

**UNGUENTUM NIHIL.**—Ointment of zinc.

**UREA** is now artificially prepared by the following process: Dry ferrocyanide of potassium, 28 parts, black oxide of manganese, 14 parts; mix. Heat the powders to a dull red on an iron plate over a charecoal fire, and when they begin to burn, stir and cool. Dissolve the product in cold water, filter, add  $20\frac{1}{2}$  parts of dry sulphate of ammonia, decant the clear liquor, and concentrate it

at a gentle heat to dryness; digest in boiling alcohol, and crystals of urea will descend as the spirit cools.—*Liebig.*

VAN SWIETEN'S DROPS.—A solution of corrosive sublimate.

VALERIAN is stimulant and antispasmodic, useful in hysteria, epilepsy, hypochondriasis, indigestion, &c. In some cases pills of valerian, rhubarb, and ginger, equal parts, are very useful, as in want of tone in the stomach, or slight derangement of that organ. The dose of valerian is 10 to 30 grains.

VARNISH TO COAT METAL.—Copal, 1 part, oil of rosemary, 1 part, alcohol, 2 to 3 parts. Apply it hot.

VERATRIA, *L.*, is slightly soluble in water, more so in ether, most of all in rectified spirit. It has no smell, but irritates the nose excessively, and has an acrid taste. It must be very cautiously used. Veratria can only be depended on when prepared by a respectable chemist, and there is no security against adulteration. 1000 grains of sevadilla only yield about 1 grain of veratria. It turns to a bright red on the addition of strong sulphuric acid. It is seldom or never given internally; the dose should be  $\frac{1}{10}$ th to  $\frac{1}{8}$ th of a grain, carefully watched. It is a powerful irritant poison. Used in ointment, &c., it is applied to contract the pupil of the eye by rubbing over the orbit; it has been employed also in tic-doloreux, neuralgia, &c., but its good effects are seldom apparent in these cases. For external application, mix veratria,  $\frac{1}{2}$  grain, with chloric ether, 2 drachms, and add soap liniment, 30 drops.

VERDIGRIS.—The diacetate of copper.

*Characters and Tests, L.*—Partly soluble in water, almost entirely so in dilute sulphuric acid, with the aid of heat. Nothing is thrown down from this solution by ammonia added in excess. It is not often used internally; it is detergent and escharotic externally.

VERDITER is made by adding chalk or whiting to a solution of nitrate of copper. The whiting is put in a tub, the

solution poured on it, and, after agitation, the whole is left to subside. The clear liquor is then poured off, and more solution added. This process is repeated until the desired colour is obtained.

**VERMILION.**—The bisulphuret of mercury. It is prepared by subliming 7 parts of mercury with 1 part of sulphur, grinding the sublimate to powder with water, and drying.

**VERMIN (TO DESTROY).**—In a pailful of water (cold) mix well 1 lb. of chloride of lime (having first diluted it into a thin paste in a bowl of water, for facility of mixture;) with a mop wet and saturate well the floor, skirtings, and any other wood work that will not suffer injury; then shut the doors and windows close. If there should be a suspicion of other tenants in the bedstead, take that down too. In three or four hours all will have disappeared or perished.

**VERRE (UN.).**—A glass—five fluid ouncees.

**VESICANTS.**—1. The evaporated ethereal tincture of cantharides melted, with twice its weight of wax, and spread on oiled silk.

2. *Blistering tissue or paper* is similar, but spread on paper. Used as blistering plasters.

**VIENNESE LAXATIVE WATER.**—Senna, 3 oz., raisins,  $1\frac{1}{2}$  oz., coriander, 2 drachms, supertartrate of potash,  $\frac{1}{2}$  oz., boiling water,  $2\frac{1}{2}$  lbs. Macerate one hour; add manna, 8 oz., polypody root, 3 drachms, strain.

**VIRGIN'S MILK (Lait Virginal).**—Tincture of benzoin,  $\frac{1}{2}$  oz.; add very gradually rose water, 1 quart.

**VINEGAR** is a well-known acid. That prepared in England is usually made from malt, or malt and barley, which is mashed with hot water as for brewing, and allowed to run to acetous fermentation. The vinegars are known as Nos. 18, 20, 22, and 24, the last being the strongest; they almost always contain a little sulphuric acid.

*Vinegar, British, L.*, is impure acetic acid prepared by

## VINEGARS.

fermentation from an infusion of malt. It is brownish, of a peculiar odour, sp. gr. 1.019, a fluid oz. is saturated by 1 drachm of crystals of carbonate of soda. After adding 10 minims of a solution of chloride of barium, to 1 oz. of this acid, and filtering, a further addition causes no precipitate. The colour of vinegar is not changed by hydrosulphuric acid being added.

*Vinegar, Aromatic.*—1. Glacial acetic acid, 8 oz., oils of rosemary, lavender, and cinnamon, of each 20 drops, bergamotte, 15 drops, oil of cloves, 24 drops, oil of neroli, 4 drops, rectified spirit, 2 drachms.  
 2. *Crystallized.*—Pour a little of the above on crystals of sulphate of potash, and bottle.  
 3. *Extemporaneous.*—Dry acetate of potash, 30 grains, oil of vitriol, 10 drops, perfume at pleasure.

All are used as refreshing scents in warm weather, sensation of faintness, &c. It is usually dropped on sponge in glass stoppered bottles.

*Vinegar of Meadow Saffron, L.*—Dried meadow saffron corms, 3½ drachms, dilute acetic acid, 1 pint, proof spirit, 1½ oz. Macerate the saffron in the acid in a closed vessel for 3 days, express, and let the liquor clear, strain, and add the spirit. Used in gout, combined with magnesia. Dose: ½ to 1 drachm.

*Vinegar of Spanish Flies, L.*—Spanish flies in fine powder, 2 oz., acetic acid, 1 pint. Macerate for 8 days, frequently shaking, express and strain. Vesicatory, applied to blister the skin.

*Vinegar of Squill, L.*—Squill, fresh dried and bruised, 2½ oz., dilute acetic acid, 1 pint, proof spirit, 1½ oz. With a gentle heat macerate the squill in the acid in a closed vessel for three days, express, let the liquor clear, strain, and add the spirit. Stimulant, expectorant. Dose: 20 to 40 drops in cough, &c.

*Vinegar, Household*, is sometimes prepared by boiling 1 lb. of sugar with each gallon of water, and fermenting with yeast. Tea leaves, herbs, &c., are sometimes added to flavour.

*Vinegar, Flavoured.*—Any herb or spice may be added to vinegar for 14 days; it is then strained for use.

*Vinegar, Distilled, L.*—Vinegar, 1 gallon; distil 7 pints in a sand bath. Sp. gr. 1.0065, a fluid oz. is saturated by 57 grains of crystallized carbonate of soda.

*Vinegar, Fruit.*—Raspberries, cherries, or strawberries, and vinegar, of each equal parts; macerate 24 hours, strain, and add to each pint 1 lb. of white sugar, boil, skim, and when cool, add to each pint 2 oz. of brandy.

**WAFERS** are made of flour and water, mixed in fine batter; it is pressed in wafer-irons, baked, and cut with round punches. Various colours are used: *Red*, red-lead, or a decoction of Brazil wood with alum; *yellow*, infusion of turmeric; *blue*, dilute neutral sulphate of indigo; *green*, blue and yellow mixed, &c.

**WARD'S RED DROP.**—A solution of tartar emetic in wine.

**WARTS, TO REMOVE.**—Use daily, nitrate of silver, acetie, or nitric acid, by applying to the top of the wart.

**WASHES** are used as cosmetics.

*Wash, Hair.*—Carbonate of potash, 1 oz., water, 1 quart, essence of rosemary, 20 drops; mix.

*Wash for Foul Teeth.*—Chloride of lime,  $\frac{1}{2}$  oz., rose-water, 6 oz.; mix. Used to remove the smell of tobacco, foul breath, &c.

*Wash for Freckles.*—Rectified spirit, 1 oz., water, 9 oz., orange-flower water, 1 oz., diluted hydrochloric acid, 1 drachm; mix.

**WATER, DISTILLED, L.**, “remains clear on the addition of either—1, lime-water; 2, chloride of barium; 3, nitrate of silver; 4, oxalate of ammonia; or, 5, hydrosulphuric acid.” The first shows the absence of carbonic acid, or carbonate of ammonia; second of sulphate of lime; third of chlorides; fourth of lime; fifth of lead. The first portion of distilled water should be rejected. It is often ordered unnecessarily in medicine, but is absolutely requisite in solutions of salts of lead, nitrate of silver, oxalate of ammonia, preparations of mercury, potash, liquor ammonia, iodide of iron, and chloride of barium.

A cubic inch of distilled water, at 62° F., barometer at 30 inches, weighs 252.458 grains, one gallon weighs

70.000 grains, or 10 lb. avoirdupois. It is 815 times heavier than atmospheric air; its specific gravity is 1·0, or unity. It is slightly compressible by enormous pressure. Water contains by weight, 8 parts oxygen to 1 part hydrogen, and by measure, 1 volume oxygen to 2 of hydrogen. Pure water is incapable of putrefaction, and is a better solvent than the ordinary liquid.

WATER, ELDER FLOWER, *L.*—Elder flowers, 10 lb., water, 2 gallons; distil 1 gallon. Used for its flavour.

WATER, LIME, *L.*—Lime,  $\frac{1}{2}$  lb., distilled water, 12 pints. Slake the lime with a little water, add the remaining water, and shake; set the covered vessel aside for 3 hours, keep the liquor and lime in stopped glass vessels, and when it is required decant the clear portion for use. Antaeid, lithontriptie. Allays obstinate vomiting, is used as an astringent in dysentery, and with sarsaparilla as an alterative in cutaneous diseases or impaired digestion. It is used combined with mercury as a wash for syphilitic sores. Dose:  $\frac{1}{2}$  to 3 oz., combined with an equal quantity of milk.

WATER, PEPPERMINT, *L.*—Dried peppermint, 2 lb., water, 2 gallons; distil 1 gallon. If the fresh herb be employed, double the weight must be used. This water can be more quickly prepared from oil of peppermint, like dill water. Stimulant, aromatic, carminative.

Prepare in the same manner PENNYROYAL and SPEARMINT water.

WATER, PIMENTO, *L.*—Bruised pimento, 1 lb., water, 2 gallons; distil 1 gallon. Or from oil of pimento, as dill water. Carminative.

WATER, ROSE, *L.*—Damask rose leaves, 10 lb., water, 2 gallons; distil 1 gallon. Fragrant.

WATER, DILL, *L.*—Bruised dill,  $1\frac{1}{2}$  lb., water, 2 gallons; distil 1 gallon. Or, oil of dill, 2 drachms, powdered flint or sand, 2 drachms, distilled water, 1 gallon. Mix the oil well with the flint or sand, then with the water, and strain the solution. Carminative. Dose, 1 drachm to 4 oz.

In the same way are prepared the waters of CARAWAY and CINNAMON, both of which are aromatic carminative vehicles for other medicines.

#### WATER-PROOFING.

*Cloth.*—1. Lay on the inside a solution of caoutchouc.  
 2. Use a solution of isinglass, alum, and soap.  
 3. Boil it in a decoction of alum.

*Boots.*—1. Oil, 5 oz., wax,  $\frac{1}{2}$  oz., Burgundy pitch,  $\frac{1}{4}$  oz., oil of turpentine,  $\frac{1}{2}$  oz.; melt together, and apply until the leather is saturated.  
 2. Suet, rosin, and bees'-wax, melted and applied.  
 3. A solution of Indian rubber, 2 drachms, and oil of turpentine, 15 oz., mixed, when dissolved by heat, with 1 pint of boiled oil.

*Damp Walls.*—Lay on a hot solution of 12 oz. of Castile soap to each gallon of water, and in 24 hours another wash of alum, 2 oz. to each gallon of water.

**WAX, BLEACHED.**—Yellow bees'-wax is exposed to the air in fine flakes or ribbons until bleached, and finally melted in water containing sulphuric acid. M. Ingenhol's mode is to melt the wax, add to each pound 2 oz. of nitrate of soda, then, by degrees, 1 oz. of sulphuric acid in 9 parts of distilled water, stirring with a glass rod until all the acid is added. It is then cooled, the vessel is filled with boiling water and set aside, the wax is finally washed with boiling water until the wash no longer precipitates with chloride of barium. This method, however, is imperfect.

**WAX, SEALING.**—Shellac, 16 parts; melt and add Venice turpentine, 5 parts, colour at pleasure. For *red*, use vermillion; *black*, ivory black; *blue*, Prussian blue or fictitious ultramarine; *green*, king's yellow and Prussian blue mixed; *yellow*, king's yellow, &c., &c. Only prepared by regular manufacturers, and not so much used now as formerly.

**WAX, BOTTLE.**—Rosin, 13 parts, wax, 1 part; melt and add any colour. Used to render corks and bungs airtight by melting the wax over them.

**WHEY** is prepared by adding a little rennet or acid, as lemon juice, &c., to milk, and warming it until curdled.

**WHITE'S, SHARP.**—Alum and wheat flour equal parts. Used by bakers to add to dough.

**WINDOWS, CRYSTALLIZED.**—Dissolve Epsom salts in hot ale or solution of gum Arabic, wash it over the window, and let it dry. If you wish to remove any, to form a border or centre piece, do it with a wet cloth.

**WHITE OILS.**—Yolks of 2 eggs, solution of ammonia, 3 oz., oil of origanum, 1 oz., turpentine, 4 oz., vinegar, 1 pint. Mix. Used as a liniment.

**WINES, L.**—“Medicated wines should be kept in stopped glass vessels, and frequently shaken during maceration.”

*Wine of Aloes, L.*—Socotrine or hepatic aloes in powder, 2 oz., powdered canella, 4 drachms, sherry wine, 2 pints. Macerate 7 days, and strain. Stomachic, purgative. Dose, 2 to 8 drachms.

*Wine of Ipecacuanha, L.*—Bruised ipecacuanha, 2½ oz., sherry wine, 2 pints. Macerate 7 days, and strain. Emetic, diaphoretic. Dose, 30 to 60 drops.

*Wine of Iron, L.*—Iron wire, 1 oz., sherry wine, 2 pints. Digest for 30 days, and strain. Mild chalybeate tonic. Dose, 1 to 4 drachms.

*Wine of Meadow Saffron, L.*—Dried corms of meadow saffron, 8 oz., sherry wine, 2 pints. Macerate 7 days, and strain. Used in gout. Dose, ½ to 1 drachm.

*Wine of Opium, L.*—Extract of opium, 2½ oz., bruised cinnamon and bruised cloves, of each 2½ drachms, sherry wine, 2 pints. Macerate for 7 days, and strain. Stimulating anodyne. Used in chronic ophthalmia, 2 or 3 drops being dropped in the outer angle of the eye at night; internally, the dose is 5 to 40 drops.

*Wine of Potassio-Tartrate of Antimony, L.*—Crystals of potassio-tartrate of antimony, 2 scruples, sherry wine, 1 pint. Powder the crystals, and dissolve. Expectorant, in doses of 15 to 60 drops; emetic, 2 to 8 drachms.

*Wine of White Hellebore, L.*—Sliced white hellebore, 8 oz., sherry wine, 2 pints. Macerate 7 days, and strain. Emetic, cathartic, and used in gout. Dose: 10 drops, 2 or 3 times a day, increased as required.

**WINE TESTS**, for lead in wine. 1. Quicklime, 1 oz., sulphur,  $1\frac{1}{2}$  oz.; heat in a covered crucible for five minutes. Take of this and of tartaric acid, each 2 drachms, mix and agitate in 1 pint of water in a stopped bottle, let it subside, decant the clear liquor, and add to it tartaric acid,  $1\frac{1}{2}$  oz.—*Hahnemann*. 2. Sulphur and oyster shells, equal parts, expose to a white heat for 15 minutes; when cold, add an equal quantity of cream of tartar, boil in water for 30 minutes, decant the clear liquor into ounce phials, and add to each 20 drops of muriatic acid.—*Dr. Paris*. Either of the above tests added to wine containing lead throws down a black precipitate.

**WOOD, To STAIN.**—*Red*—1. Water, 1 gallon, Brazil wood, 1 lb., pearlash, 1 oz.; boil for 3 hours, brush it hot over the wood, and then, while wet, brush the wood with a solution of alum, 2 oz., in water, 1 quart. 2. *Light*—Add to each gallon of the last 2 oz. more pearlash. 3. *Dark*—Logwood, 8 oz., water, 2 quarts; boil till of a deep colour, and add carbonate of potash,  $\frac{1}{2}$  oz., brush it hot over the wood.

*Yellow*—1. Water, 1 gallon, French berries, 1 lb., alum,  $\frac{1}{2}$  oz.; boil for 2 hours, and use it hot. 2. Logwood decoction without a mordant. 3. Spirit of wine, 1 pint, turmeric, 1 oz.; digest 14 days, and strain.

*Blue*—1. Solution of sulphate of indigo is used hot, and, while hot, a solution of cream of tartar, 3 oz., in water, 1 quart. 2. A solution of verditer is brushed over until the wood appears a dark green, and then a hot solution is applied of pearlash, 2 oz., in boiling water, 1 pint.

*Purple*—Logwood, 1 lb., Brazil wood, 4 oz., water, 1 gallon; boil 3 hours, brush it on while hot, and when dry, use a solution of pearlash, 1 drachm, in water, 1 quart.

*Black*.—1. Vinegar in which nails and old iron have digested, with a small quantity of verdigris. 2. A decoction of logwood, &c., is brushed on (prepared as *purple*, without Brazil wood;) when dry, an infusion of galls, 2 oz., in water, 1 quart, is applied, and while wet, brushed over with water, 1 quart, sulphate of iron, 2 oz. 3. Use first a solution of nitrate of copper, and afterwards the decoction of logwood.

*Mahogany*.—1. Water, 1 gallon, madder, 8 oz., fustie, 4 oz.; boil, brush on while hot, and while wet streak it with black to vary the grain. This imitates Honduras mahogany. 2. Madder, 8 oz., fustic, 1 oz., logwood, 2 oz., water, 1 gallon; boil, brush on hot, and when dry, brush over it an infusion of pearlash, 1 draehm, in water, 1 pint. This resembles Spanish mahogany.

Any of the stained woods may be varnished, which will greatly improve their appearance.

**WORM CAKES, STOREY'S.**—Calomel, 20 grains, jalap, 60 grains, ginger, 40 grains, white sugar, 1 oz., vermillion to colour; make a mass with syrup, and divide into 30 cakes, each of which contains 1 grain of calomel. Dose: 2 to 4, fasting in the morning.

*Ching's.*—Calomel, jalap, and sugar.

**YEAST, ARTIFICIAL.**—It is easy to increase the quantity of yeast, when there is some to work with, but to originate it is more troublesome. Yeast is generally easily procured, and the artificial preparation is tried only as an experiment, though it might be useful to colonists to be able to obtain it without trouble.

1. Mix wheat flour to a paste with water, cover it lightly, and let it ferment 7 days. Prepare wort, and boil it with hops, as for beer, and when cooled to 90°, add to it the dough mixed with tepid water. Let the whole stand for some hours, and when the liquor is clear some excellent yeast has settled to the bottom.
2. Honey, 5 oz., cream of tartar, 1 oz., malt, 16 oz., water at 122° F., 3 pints; mix, and when cooled to 65° cover it, and keep to that temperature until yeast is formed.

3. Water, 2 quarts, wheat flour to thicken; boil gently for 30 minutes, and when cooling add 8 oz. of sugar, and 4 tablespoonfuls of yeast, keep the whole moderately warm. A thin liquor will arise which must be thrown away, and the remainder kept covered in a cool placee.

**YEAST, To PRESERVE.**—1. Place it in a canvass bag, expose it to pressure until it is quite stiff, when it may be preserved in close vessels. 2. Paint it on dishes, and repeat the coats as they dry until thick enough, when it may be detached, and will keep perfectly good.

**YELLOW, NAPLES.**—Lead, 6 lbs., antimony, 4 lbs., alum and common salt, of each 4 oz.; mix and calcine. Used as a paint.

**YELLOW, PATENT.**—Salt, 1 lb., litharge, 4 lb.; grind with water, wash out the carbonate of soda, and heat the residue until it turns a fine yellow. Used as a paint.

**YELLOW LIQUID FOR FOILS.**—Heat hay saffron in five times its weight of distilled water; and when the desired colour is attained, decant the clear liquid, and mix with gum or isinglass. After applying, it should be varnished.

**ZAFFER** is cobalt ore roasted, and ground with 2 parts siliceous sand. Used by enamellers and painters.

**ZINC, L.**—Its sp. gr. is 6.86; it is soluble in nitric acid. What is thrown down by ammonia, is again dissolved when ammonia is added in excess.

**Zinc, Chloride of, L.**—Hydrochloric acid, 1 pint, distilled water, 2 pints, zinc in small pieces, 7 oz.; mix the acid and water; to these add the zinc, and the effervescence being nearly finished, apply heat until bubbles cease to be evolved, pour off the liquor, strain, and evaporate to dryness. Melt the salt in a covered crucible to a red heat, pour it out on a smooth stone, cool, break it to pieees, and preserve in a well stopped bottle.

**Characters and Tests.**—Colourless, deliquesces if exposed

to air, is soluble in water or rectified spirit. From the watery solution a precipitate is thrown down by hydro-sulphuric acid, or ferrocyanide of potassium; ammonia or potash causes a white precipitate, which is re-dissolved by an excess of either alkali; what is precipitated by carbonate of potash or ammonia is white, but is not again dissolved when these are added in excess.

A painful caustic in cancers; not used internally.

*Zinc, Oxide of, L.*—Sulphate of zinc, 1 lb., sesquicarbonate of ammonia,  $6\frac{1}{2}$  oz., distilled water, 3 gallons. Dissolve separately the sulphate and sesquicarbonate in 12 pints of water, and strain, then mix; wash the precipitate well with water, and heat it in a strong fire for two hours. Powdered yellowish white; soluble in ammonia, potash, and hydrochloric acid.

**ZINCING.**—Copper and brass may be zinced by boiling them in a solution of chloride of zinc, pure zinc turnings being added in excess. Or, use zinc and solution of caustic potash, or hydrochlorate of ammonia.



## GLOSSARY OF MEDICAL TERMS, CONTRACTIONS, OLD NAMES, AND SYNONYMS.

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The following Glossary will be found particularly useful for reference when old chemical works or reipes are examined. Though the list might be greatly extended, sufficient names are inserted for general use, while a collection of obsolete terms only found in one or two works, would be more cumbersome than serviceable. *Alistoles* for Sal-ammoniae, or *Allosat* for Quicksilver, might never once be required; yet some hundreds of such terms may be found in very old works, and are collected in medieval dictionaries, such as Hooper's, where the student will find them.\*

It will be observed that, in the following list, the ingredient is not repeated under the head of tincture, mixture, pill, &c., the inquirer must, therefore, look for the name of the ingredient in such cases. Syrupus meconio will be understood by looking for meconio, which will show the article to be syrup of poppies; while tincture of Krameria will be

\* Crabb's Technological Dictionary contains a great number, some of which cannot be readily found elsewhere.

found under Krameria to be synonymous with tincture of Rhatany. Sometimes the name is inverted, as Basilic powder is found under the word Powder. In the old names, terms are often carelessly applied, as oxychloride, submuriate, or subchloride, all mean occasionally the same substance; but it must be ascertained what article is meant, before relying on this similarity of name, which is not constant, for it by no means follows that calomel and corrosive sublimate are alike, because they have at different times both been called chloride of mercury.

The contractions generally used as directions to the pharmacist will be found in their order, and all the most generally useful are included in the list, with translations of their meanings.

## GLOSSARY.

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A, a. a., ana...Of each.	Acorus..Sweet-flag; Calamus aromaticus.
AAA...Amalgamation.	Aeute...Recent, a late attack.
Abdom., abdomen...The belly.	Adeps anseris...Goose grease.
Abesum...Unslack'd or quick lime.	Adibat...Mercury.
Abortion...A miscarriage.	Ados...Water in which hot iron has been cooled.
Abrotanum...Southernwood.	Ad 2 vic., ad secundam vicem... To the second time.
Abs. dolor, absente dolor...Pain being absent.	Ad., adde, addantur...add, let them be added.
Abs. febr., absente febre...Fever being absent.	Ad def. animi, ad defectione animi...To fainting.
Absinthii...Wormwood.	Ad deliquium animi...To fainting.
Absorbents...Alkaline or earthy bases, which neutralize or absorb acids.	Addendus...To be added.
Abstraetitius...The native spirits of aromatic vegetables.	Ad duas vices...For two times.
Acacia...Gum Arabic.	Ads. febre, adstante febre...While fever is present.
Acartum...Red lead.	Ad gr. acid., ad gratam aciditatem...To a pleasant acidity.
Aceesent...Readily turning sour; having acid properties.	Adipose...Fatty substance.
Acetum...Vinegar.	Adipsia...Absence of thirst.
Acetum Britannicum...British vinegar.	Adjac., adjaceens...Adjacent.
Acetum Gallicum...French vinegar.	Ad libitum...At pleasure.
Acetum vini...Wine vinegar.	Admove, admoveatur...Apply, let it be applied.
Achmadium...Antimony.	Admoveantur...Let them be applied.
Acid of Lemons...Citric acid.	Ad to...Make up the quantity ordered, as, "Aqua Menth. Pip. ad to $\frac{3}{4}$ viij.," make up 8ounces with peppermint water.
Acid of Salt...Muriatic or hydrochloric acid.	Adynamia ... A defect of vital power.
Acid of Sugar...Oxalic acid.	
Acid Vitriolated Tartar...Bisulphate of potash.	

Aerated...Water having brass in it: now used to denote liquids charged with carbonic acid gas.	Alt. q. n., alterna quaque nocte... Every other night.
Aerial acid...Carbonic acid.	Alteratives...Medicines which restore the healthy functions of the body, without greatly affecting the evacuations.
Ærugo...Verdigris, diacetate or rust of copper.	Althææ...Marsh mallows.
Æs ustum...Red oxide of copper.	Alum, roach...Roman, Turkey, or red alum, a pure palish red alum, generally imitated with common alum, and a little rose pink.
Æthiops per se...Protoxide of mercury.	Alumen exsiccatum...Dried alum.
Æthiops Plummeri...Calomel and sulphuret of antimony, equal parts.	Aluminus...Alum.
Affidra...Ceruse, white lead.	Alvo adstr., alvo adstricta...When the bowels are confined.
Affion ... An Arabic name for opium.	Amara...Bitter.
Ageustia...A defector or loss of taste.	Amaurosis...A diminution or total loss of sight.
Aggr. feb., aggrediente febre... While the fever is coming on.	Amenorrhœa...An obstruction of the menses.
Agrium...An impure alkali.	Amentia...Imbecility of mind.
Ague drop...Solution of arsenious acid.	Ammonia, Aurate of...Fulminating gold.
Alabari...Lead.	Ammonia, Ferrochloride of...Ammonio-chloride of iron.
Alba...White.	Ammoniacum, Emulsion of...Ammoniacum mixture.
Alba terra..Sulphuret of mercury, the philosopher's stone.	Ammoniacum, Milk of...Ammoniacum mixture.
Albata...German Silver.	Ammoniacum, Lac..Ammoniacum mixture.
Albi...Sublimate.	Ammoniated oil ... Liniment of ammonia.
Albiss...Albi, white.	Amplum...Great; cochl. amp. a tablespoonful.
Alexipharmics...Supposed remedies against poison.	Amorphous...Without shape; a term applied to confused masses or crystals.
Alfacta...Distillation.	Amygdala...Almonds.
Algaroth, powder of ... A compound of the oxide and chloride of antimony, the oxychloride of antimony.	Amyli iodidum...Iodide of starch.
Alkahest...A solvent or supposed solvent liquid, as the alkahest of Glauber—oil of tartar.	Amyli...Starch.
Alkaline air...Ammonia.	Amylum...Starch.
Allii...Garlic.	Ana, A A...Of each a like quantity.
Aloe colata...Strained aloes.	Anderson's Pills...Pill of aloes.
Aloes lota...Extract of aloes, purified aloes.	Anæmia...Deficiency of blood.
Aloes melted...Strained aloes.	Anæsthesia...Loss of the sense of touch.
Alter. hor., alternis horis...Every other, or every second hour.	
Alt. q. h., alterna quaque hora... Every other hour.	

Anaphrodisia...Impotence, loss of generative power.

Anasarca...A form of dropsy.

Anethi...Dill.

Aneurisma...The dilatation of an artery, or the heart.

Angostura...Cusparia bark.

Anhydrous...Free from water.

Auil...Indigo.

Animal charcoal...Bone or ivory black.

Anodyne...A medicine to relieve pain.

Anorexia...Want of appetite, without loathing of food.

Anosmia...Loss of the sense of smell.

Antacids...Remedies which neutralize acids.

Anthelmintics...Medicines which destroy worms, vermifuges.

Anthemidis...Chamomile.

Anthos...Flowers, rosemary.

Antimon...Antimony.

Antimony, Butter of...Chloride or muriate of antimony.

Antimonium vitrificatum...Glass of antimony.

Antiperiodics ... Medicines employed against disorders which recur at fixed intervals.

Antiscorbutics...Medicines which prevent or remove scurvy.

Antiseptics ... Substances which preserve meat, and prevent putrefaction; as nitre, salt, spices, sugar, treacle, vinegar, &c.

Medicinal antiseptics are such as bark, wine, spirits, acids, &c.

Antispasmodics..Medicines which allay spasms and other pains.

Aperient...Having the power to gently relax the bowels, as castor oil, Epsom salts, Seidlitz powders, and mild pills.

Aphonia...Dumbness, speechlessness.

Aplitha...The thrush, little white

ulcers in the mouth and on the tongue.

Apoplexy...A sudden suspension of the vital powers, resembling a fit.

Apozem...A decoction.

Applicetur...Let it be applied.

Aq...Contraction for aqua, water.

Aqua anethi...Dill Water.

Aqua argentea...Quicksilver, mercury.

Aqua astricta...Frozen water.

Aqua bulliens...Boiling water.

Aqua calcis...Lime water.

Aqua carui...Caraway water.

Aqua cassiae...Cassia water.

Aqua cinnamomi...Cinnamon water.

Aqua coloniensis..Eau de Cologne, Cologne water.

Aqua communis...Common water.

Aqua depurata...Distilled water.

Aqua destillata...Distilled water.

Aqua ex flumine...River water.

Aqua ex lacu...Lake water.

Aqua ex nive...Snow water.

Aqua ex palude...Marsh water.

Aqua ex puteo...Well water.

Aqua fervens...Hot water.

Aqua fluvialis...River water.

Aqua foeniculi...Fennel water.

Aqua fontana...Spring water.

Aqua fortis (strong water,...) Nitric acid.

Aqua imbrium...Rain water.

Aqua kali...Solution of carbonate of potash.

Aqua lavendulæ...Lavender water.

Aqua marina, or maris...Sea-water.

Aqua mellis...Honey water.

Aqua menthæ piperitæ...Peppermint water.

Aqua menthæ viridis...Spearmint water.

Aqua menthæ pulegii...Pennyroyal water.

Aquæ minerales.. Mineral waters.	Assafœtida Lac... Assafœtida mixture.
Aqua nivalis... Snow water.	Asthma... A disease of the chest, known by a difficulty of breathing, and fits of coughing.
Aqua pluvia, or pluvialis... Rain water.	Astringents ... Substances which confine the bowels, or constrict the animal fibre.
Aqua potassæ.. Solution of potash.	Atramentum... Ink.
Aqua puteana... Well water.	Atramentum Indicum.. Indian ink.
Aqua regia... Nitro-muriatic or nitro-hydrochloric acid.	Atrophy... A wasting away of the body.
Aqua regina Hungaria... Hungary water.	Aurantii... Orange.
Aqua rosæ... Rose water.	Auri, aurum... Gold.
Aqua sambuci... Elderflower water.	Auric acid... Peroxide of gold.
Aqua sapphirini... Solution of ammonio-sulphate of copper.	Auri chloridum or terchloridum ... Chloride of gold.
Aqua tepida... Warm or lukewarm water.	Auri chloruretum ... Chloride of gold.
Aqua vitæ... Water of life.	Auri iodidum... Iodide of gold.
Aquila alba.. Chloride of mercury, calomel.	Auri oxidum ammoniatum... Fulminating gold.
Archil ... Turnsole, litmus, cudbear.	Auri pigmentum... Orpiment.
Argenti nitratis.. Nitrate of silver, lunar caustic.	Aurum foliatum... Leaf gold.
Argentum... Silver.	Aurum fulminans... Fulminating gold.
Argentum vivum ... Quicksilver, mercury.	Aurum granulatum... Grain gold.
Argol... Impure bitartrate of potash.	Aurum in libellis... Leaf gold.
Armoraciae... Horseradish.	Aurum musivum... Bisulphuret of tin.
Arsenic.. Metallic arsenic, regulus of arsenic, black arsenic.	Aurum murias... Chloride of gold.
Arsenic, Butter of... Chloride, or sesqui-chloride of arsenic.	Aurum potabile... Liquid gold.
Arsenic, Oxide of ... Arsenious acid, white arsenic.	Aurum pulveratum.. Gold powder.
Arsenites ... Compounds of the bases with arsenious acid.	Avenæ... Gruel.
Arthritis... Inflammation of the joints.	Axunge... Hog's lard.
Arthropyosis.. Suppuration in the cavity of a joint.	Azote... Nitrogen gas.
Arum... Wake-robin.	Azurum... Smalts.
Ascites... Dropsy of the belly.	BACCIS Lauri... Laurel berries.
Asphyxia.. Suffocation, suspended animation.	Balm of Mecca... Balm of Gilead, a factitious preparation of rosin and benzoin with perfume.
Assafœtida, Milk of... Assafœtida mixture.	Balneum... A bath.
	Balneum arenæ... A sand bath.
	Balneum calidum... A hot water bath.
	Balneum mariæ... A warm water bath.

Balsam of soap...Soap liniment.	Boccis lauri...Rue.
Balsam of sulphur...See Oil of sulphur.	Boiled oil...Boiled linseed oil.
Balsamum polychrestum..Jesuits' drops.	Boyle's fuming liquor...Hydro-sulphuret of ammonia.
Balsamum vitae...Balsam of life.	Brimstone...Sulphur.
Bardana...Burdock.	Brodium...Broth.
Barilla...Impure soda, prepared from sea plants.	Brodium salis...Decoction of salt.
Barilla, Salt of..Carbonate of soda.	Bronchitis...Inflammation of the air-tubes.
Basilicon...The resin cerate, -P.L.	Bubo...A swelling of the lymphatic glands.
B B., Bbds., Barbadiens...Barbadoes.	Bulimia...Insatiable appetite.
Beguin's sulphuretted spirit ...	Bulliat...Boil.
Hydrosulphuret of ammonia.	But., butyrum...Butter.
Belladonna...Deadly nightshade.	B. V., balneum vaporis...A vapour bath.
Benjamin...Gum benzoin.	
Berlin blue...Prussian blue.	CACHEXIA...A bad or diseased condition of body.
Bes...Eight ounces.	Cadet's fuming liquor...Oxide of kadodule, alkarsine.
Bezoar...A destroyer of poison, an antidote.	Cæna or Cœna...Supper.
Bib. bibe...Drink.	Calcis carbonas friabilis...Prepared chalk.
Bibat...Drink.	Calcium, Chloride of...Muriate or hydrochlorate of lime.
Bis...Twice.	Caligo..Dimness of sight, or blindness.
Bis ind., bis in dies ..Twice a day.	Calom., calomelanos...Protochloride or chloride of mercury, calomel.
Bismuth, Magistry of...Subnitrate of bismuth.	Calx...Lime.
Bismuth, Trisnitrate of...Subnitrate of bismuth, pearl white, Fard's Spanish white.	Calx chlorinata..Chloride of lime.
Black drop...Fermented wine of opium.	Calx of zinc...Oxide of zinc.
Black wash...Calomel and lime water; for sores, &c.	Campeachy wood...Logwood.
Bleaching liquid..Solution of chloride of potash.	Camphine...Rectified oil of turpentine.
Blende..Native sulphuret of zinc.	Cancer...A malignant tumour.
Blennorrhœa...A discharge of mucus from the vagina or urethra.	Cannabis...Hemp.
Blue carmine...Soluble or neutralized sulphate of indigo.	Cantharides ... Lyttæ; blistering or Spanish fly.
Blue ointment...Mercurial ointment.	Cap., capiat...Take, let the patient take.
Blue Pill...Mercurial pill, pil hydrargyri.	Capiendæ...To be taken.
Blue vitriol...Sulphate of copper.	Capsici, -um...Cayenne pepper.
B. M...Balneum mariæ, a warm-water bath.	Caput mortuum vitrioli...Oxide of iron.
	Carbonate of lime...Chalk.

Carbon...Charcoal.	Ceratum citrinum( <i>P. L.</i> 1745.)...
Carbonis ligni...Wood charcoal.	Resin cerate.
Carburet of iron...Black lead.	Ceratum cypuloticum ( <i>P. L.</i> 1745.)
Carditis...Inflammation of the heart.	...Calamine cerate.
Carduus benedictus...Blessed or holy thistle.	Ceratum labiale...Lip salve.
Caries...The ulceration or decay of a bone.	Ceratum resinæ flavæ ( <i>P. L.</i> 1788.)
Carminatives...Medicines that remove flatulency.	...Resin cerate.
Carron oil...Liniment of lime and oil, for burns.	Ceratum rubrum...Cerate of sulphuret of mercury.
Carui...Caraway.	Cerevisia...Beer.
Caryocostinum...Scammony.	Ceruleus...Blue.
Caryophilli, -orum...Cloves.	Ceruse...White lead.
Cassia...A substance resembling cinnamon, for which it is frequently substituted.	Cervina...Buckthorn.
Cataplasm...A poultice.	Cetacei...Spermacti.
Catarrh...Cold in the head or chest.	Chamæpitys...The herb ground-pine.
Cathartics...Purgative medicines acting strongly on the bowels.	Chart., chartula...A paper.
Caustics...Substances which destroy the skin, and surrounding tissues.	Chelæ...The claws of the crab. (Symbol 69.)
Cautery, actual cautery ... Iron heated to whiteness, and applied externally to destroy the skin.	Chemic blue...Sulphate of indigo.
Cawk...Sulphate of Barytes.	Chimaphilæ ... Pyrola, winter green.
C. C., cornu cervi...Hartshorn.	Chloride of ethule..Chloric ether.
C. C. U., cornu cervi ustum... Burnt hartshorn.	Chloride of sodium..Common salt.
Cephalgia...Headache.	Chlorosis...Green sickness.
Cephalitis...An inflammation of the head, affecting the membranes and substance of the brain.	Choke damp...Carbonic acid gas.
Cephalic snuff...Asarabacea snuff.	Cholera...A disease characterized by severe spasms, accompanied by vomiting and purging.
Cera...Wax.	Chorea...St. Vitus's dance, convulsive movements of the limbs.
Cera alba..White or bleached wax.	Chronic...Old, habitual.
Cera flava...Yellow or unbleached wax.	Cicutæ...Hemlock, conii.
Cerasiatum...A purging medicine, of which the chief ingredient is the juice of cherries.	Cinchonæ...Peruvian bark.
	Cinnabar...A sulphuret of a metal, as mercury or antimony.
	Citrine ointment...Nitrate of mercury ointment.
	Clavus...A pain in the head limited to some particular part.
	Clyster...An enema.
	C. m., or C. m. s., cras mane sumendum...To-morrow morning.
	C. n. cras nocte ... To-morrow night.
	Coccus...Cochineal.
	Cochlearia...Scurvy grass.
	Cochlearium...Spoonful.

Cochleat, Cochleatim...By spoonfuls.	Cons., conserva...Conserve; also, keep thou.
Coch. ampl., cochleare amplum... A large spoonful, a tablespoonful, about one fluid oz.	Conserua cynosbati... Confection of the dog-rose.
Coch. inf., cochleare infantis...A child's spoonful.	Conserve...Confection, electuary.
Coch. mag., cochleare magnum... A large spoonful.	Cont. med., or rem., continuenter medicamenta, or remedias...Continue the former medicines.
Coch. med., cochleare medium... A middle sized or dessert spoonful, about two fluid drachms.	Contrayerva..A West Indian plant formerly reputed an antidote to poison, whence its name.
Coch. mod., cochleare modicum... A dessert-spoonful.	Contundae...Bruise.
Coch. parv., cochleare parvum... A teaspoonful, about one fluid drachm.	Convulsio...Convulsions, contraction and agitation of the limbs.
Col., cola...Strain.	Copper, Carbonate of...Dicarbonate of copper, mineral green.
Col., colatus...Strained.	Copper, Chloride of ... Muriate, protochloride, or hydrochloride of copper.
Colat., colatur...Let it be strained.	Copper, Dioxide of...Red oxide of copper.
Colatura...Of, or to, the strained liquor.	Copper, Oxychloride of...Brunswick, Bremen, or Friezland green; green copper.
Colchicum...Meadow saffron.	Copper, Protoxide of..Black oxide of copper.
Colcothar...Oxide of iron.	Copper, Prussiate of...Ferrocyanide of copper.
Colet., coletur...Let it be strained.	Copper, Subchloride of...Dichloride, white muriate, or resin of copper.
Colet., coletur...Let them be strained.	Copperas...Sulphate of iron, green vitriol, vitriol of iron.
Colica...The colic, or bellyache.	Coq., coque...Boil.
Collyrium...Eye water.	Coq. ad med. consumpt., coque ad medietatis consumptionem... Boil down to one-half the quantity.
Colophonium...Black rosin.	Coquantur...Let them be boiled.
Color., coloretur...Let it be coloured.	Coq. in S. A...Boil in sufficient water.
Comata...Disorders accompanied with torpor.	Cort., cortex...Bark.
Comitisæ palmæ pulvis...Carbone of magnesia.	Cornu cervi...Hartshorn.
Common caustic..Potash with lime.	Cornu uesti...Burnt hartshorn.
Comp., compositus...Compound.	Coronopus..Buckthorn, plantain.
Concentrated annotto ...Purified annotto.	Corrosive sublimate...Bichloride or perchloride of mercury.
Concisa...Cut.	
Condri...Irish moss.	
Confection cardiana ... Aromatic confection.	
Confection of hips...Confection of the dog-rose.	
C., cong., congius...A gallon.	
Conii...Hemlock.	

Crastinus... To-morrow, for to-morrow.

Cream of tartar... Bitartrate of potash.

Cretaceous.. Compounded or made with chalk.

Creta... Chalk.

Creta alba... Prepared chalk.

Creta Gallica... French chalk.

Creta precipitata ... Precipitated chalk.

Crocus... Saffron.

Crocus, or crocus martis... Oxide of iron.

Crocus... A calcined metal of a reddish colour, usually applied to iron.

Crocus antimonii... Sulphuretten oxide of antimony.

Crocus metallorum.. Sulphuretten oxide of antimony.

Crocus solis... Peroxide of gold.

Crocus veneris... Calcined copper.

Cubebæ... Cubebs.

Cucurbitula cruenta... Cupping.

Cucurbitula cum ferro... Cupping.

Cucurbitula sinc ferro... Dry cupping.

Cudbear... Archil, litmus, turnsole.

*rules* Cuj., cujus... Of which, of this.

Cujus., cujuslibet... Of any.

Cum... With.

Cupri... Copper.

Curcuma... Turmeric.

C. v., cras vespera... To-morrow evening.

*14* Cyath., cyathus... A cup or glass.

Cyath. theæ. cyatho theæ... In a cup of tea.

Cyatlius vinarius... A wine-glass (from  $1\frac{1}{2}$  to  $2\frac{1}{2}$  fluid ozs.)

Cydoniæ... Quince, the seeds.

Cynanche... Sore throat, croup.

Cystitis ... Inflammation of the bladder.

D., Dosis... A dose.

Daffy's elixir.. Compound tincture of senna.

Dauci, -us... The carrot.

Deaur. pil., deaurentur pilulæ. Let the pills be covered with gold leaf.

Deb. spiss., debita spissitudo... Due consistence.

Dec., decanta... Pour off.

Decem... Ten.

Decoction... A boiled solution.

Decoctum lusitanicum ... Compound decoction of sarsaparilla.

Decorticated ... Deprived of the bark.

Decub. hor., decubitus hora... At bedtime.

De d. in d., de die in diem... From day to day.

Deglut., deglutiatur... Let it be swallowed.

Dej. alvi., dejectiones alvi.. Stools.

Demulcents ... Simple remedies which allay irritation.

Dephlogisticated air.. Oxygen gas.

Dephlogisticated nitrous air... Nitrous oxide gas.

Dephlogisticated spirit of salt... Chlorine.

Depilatory... A compound for removing hair from the skin.

Det., detur... Give it, let it be given.

Diabetes... Excessive secretion and flow of urine.

Diachylon plaster ... Galbanum plaster, lead plaster.

Diaconion... Syrup of poppies.

Dialthææ... Marshmallow.

Diana... An alchemical name for silver.

Diaphoretics... Agents which excite perspiration.

Diarrhoea... Looseness or relaxation of the bowels.

Dieb. alt., diebus alternis... Every other or every second day.

Dieb. tert., diebus tertii... Every third day.

Digitalis...Foxglove.	Dutch liquid...Olefiant gas, carburetted hydrogen.
Dimul., diluculo...At break of day.	Dysecœa...Dcafness.
Dil., dilue., dilutus...Dilute, diluted.	Dysentery...The blood-flux, frequent griping stools, with evacuations of blood.
Dim., dimidius...One-half.	Dysopia...Bad or depraved sight.
D. in 2 plo., deter in duplo...Give twice the quantity.	Dysorexia...A depraved appetite.
D. in p. æq., dividatur in partes æquales ... Divide into equal parts.	Dyspepsia...Indigestion.
Dippel's oil...Rectified oil of harts-horn.	Dysphagia...Difficulty of swallowing.
Diuresis...A great flow of urine.	Dyspnœa..Difficulty of breathing.
Diuretics ... Medicines which increase the flow of urine.	Dysuria..Difficulty in discharging the urine.
Diuretic salt ... Acetate of potash.	EAU...Water.
Donec alv. bis dej., donec alvus bis dejecerit...Until the bowels have acted twice.	Eau benite...Holy water.
Donec alv. respond., donec alvus respondet... Until the bowels have acted.	Eau d' Hongrie...Hungary water.
Donec alv. sol. fuer., donec alvus soluta fuerit...Until the bowels have acted.	Eau de fontaine...Spring water.
Donovan's solution...Solution of hydriodate of arsenic and mercury.	Eau de mer...Sea water.
Dover's powder...Compound ipecacuanha powder.	Eau de puits...Well water.
D. P., directione propria...With a proper direction.	Eau de riviere...River water.
Drago mitigatus...Chloride of mercury, calomel.	Eau de rose...Rose water.
Drastics...Powerful purgatives.	Eau de vie...Water of life, brandy.
Draught...A single dose of liquid medicine.	Eau douce...Fresh water.
Drop lake...Brazil-wood lake.	Eau forte...Strong water, aqua-fortis.
Drying oil...Boiled linseed oil.	Eau medicinale...Tincture of colchicum.
Dulcamaraæ...Bitter-sweet, woody night-shade.	Eburn., eburneus...Ivory, made of ivory.
Dulce, Dulcis...Sweet.	Ecligma...A linctus.
Dulcified acid...Ether.	Echymoma..A discoloured swelling, as a bruise, &c.
Dulcified marine acid...Muriatic ether.	Ectopia...A displacement of any part.
Duodecim...Twelve.	Ed., edulcorated.
Durus...Hard.	Ej., ejusdem...The same, of the same.
	Elect., electuarium..An electuary.
	Electuary...Confection, Conserve.
	Elephantiasis...Black leprosy.
	Elixir antivenereum ... Jesuits' drops.
	Elixir proprietatis ... Compound tincture of aloes.
	Elixir proprietatis cum acido... With sulphuric acid.

Elixir proprietatis tartarizatum...	Errhines...Substances which excite sneezing.
With salt of tartar.	
Elixir sacrum...Tincture of aloes and rhubarb.	Erysipelas...Inflammation of the skin.
Elixir salutis ... Daffy's elixir, the compound tincture of senna.	Escharotics...Caustic substances which destroy the skin, and leave a scab.
Elixir of vitriol...Aromatic sulphuric acid.	Essence of peach kernels...Bitter almond flavour.
Embrocation...An embrocation or liniment.	Essentia binæ (essence of malt)... Brewer's colouring, burnt sugar.
Emetics...Medicines which excite vomiting.	Ether...A spirit distilled from alcohol and acid.
Emmenagogues..Medicines which promote menstruation.	Ether, Chlorhydrie..Chloric ether.
Emplastrum...A plaster.	Ether, Hydrochloric ... Chloric ether.
Emplastrum cephalicum ... Burgundy pitch plaster.	Ether, Muriatic...Chloric ether.
Emplastrum picis ... Burgundy pitch plaster.	Ether, Marine...Chloric ether.
Empyreal air...Oxygen gas.	Ether cyanicus...Cyanic ether.
Endemics...Diseases peculiar to certain countries.	Ether, Bicyanuret of ... Cyanic ether.
Enema...A liquid medicine injected into the bowels.	Ether hyponitrous..Nitrous ether.
Ens martis...Ammonio-chloride of iron.	Ether rectificatus...Ether.
Ens veneris Boylci...Ammonio-chloride of iron.	Ether sulphuricus...Ether.
Enteritis...Inflammation of the intestines.	Ether vitriolicus...Ether.
Enurcsis...An involuntary flow of urine.	Ethiops martial...Oxide of iron.
Ephialtes...Nightmare.	Ethiops miucral...Oxide of mercury.
Ephidrosis...A violent morbid perspiration.	Ethiopsjovialis...Tin, quicksilver, and sulphur, equal parts.
Epilepsy...Convulsions, the falling sickness.	Ethule...Ether; hence arises numerous titles for the different others, as,
Epiphora...An involuntary flow of tears.	Ethule, Oxide of...Ether.
Epischeses...A suppression of excretions.	Ethule, Chloride of ... Chloric ether.
Epispastics...Blistering medicines or plasters.	Ethule, Iodide of..Hydriodic ether.
Epistaxis .... Bleeding from the nose.	Ethule, Hyponitrite .... Nitrous ether, &c., &c.
Eps m salts...Sulphate of magnesia.	Exacerbation...An increase of fever.
	Exanthemata ... Rashes or red patches on the skin.
	Exfoliation...Separation of a dead piece of bone from the living.
	Exhib., exhibeat...Administer, or give it.

Ex mellis...In honey.	Fixed air...Carbonic acid gas.
Exostosis..A morbid enlargement, or hard tumour of a bone.	Fixed alkali..Carbonate of potash.
Expectorants...Medicines which relieve the lungs of phlegm.	F. L. A., fiat lege artis...Make by the rules of art.
Ex theriaca...In treacle.	Flatulency...Wind or gas in the stomach and bowels.
Exsiccatum...Dried.	Florcs martiales...Ammonio-chloride of iron.
Ext. sup. alut. moll., extende super alutam mollem ... Spread upon soft leather.	Flores salis ammoniaci martialis ... Ammonio-chloride of iron.
Extract ... The cvaporated ex- pressed juice of plants, &c.	Flowers of zinc...Oxide of zinc.
Extract of Saturn...Solution of diacetate of lead.	Fl. fluidus...Fluid; by measure.
F., FAC...Make.	Fluoric acid...Hydrofluoric acid.
F. H., fiat haustus ... Make a draught.	F. M., fiat mistura...Make a mixture.
F. pil., fiant pilulæ...Make into pills.	Folium...Leaf.
F. venes...Bleed.	Fordyce's pills...Gamboge pills.
Farina...English arrow-root, potato starch, flour.	Fortius...Strong.
Farina tosta...Baked flour.	Fotus...Fomentation.
Fasc., fasciculus...A bundle.	Fowler's solution...Solution of arsenite of potash.
Feb. dur., febre durante...During the fever.	Friar's balsam...Compound tincture of benzoin.
Febres...Fevers.	F. S. A., fiat secundem artem... Make according to art.
Febrifuge..A remedy against fever.	Fuci amylacei...Ceylon moss.
Fel...Gall.	Fuliginis...Soot, smoke.
Fel ursi...Bear's gall.	Fuscum...Brown.
Fel leporis...Hare's gall.	G. G. G., GUMMI guttæ gambæ... Gamboge.
Fel anguillarum...Gall of eels.	Ganglion...An enlargement like a knot in a nerve, also a tumour.
Fellis bovini...Ox-gall.	Gastritis ... Inflammation of the stomach.
Female pills..Compound iron pills.	Gastrodynia...A pain in the stomach.
Ferri...Iron.	Gel. quav., gelatina quavis...In any jelly.
Ferri carbonas..Carbonate of iron.	Geoffroyæ...Cabbage.
Ferri rubigo...Rust of iron.	Gilder's pickle...Gilding liquor.
Ferri sulphas...Copperas, green vitriol.	Glass of antimony...Crude antimony calcined.
Ferrocyanide...Prussiate.	Glastum...Woad, a dye stuff.
Fiat...Make, let there be made.	Glauber's salt...Sulphate of soda.
Fict., fictilis...Earthcn.	Glycyrrhize...Liquorice root.
Filt., filtrum...A filter.	Glyster...An enema.
Filicis...Male fern.	Gold, Crocus cf...Peroxide of gold.
Fire damp..Carburetted hydrogen.	
Fist. arm., fistula armata...A clyster pipe and bladder.	

Gold, Fulminating ... Aurate of ammonia, aurum fulminans.	Hepatic gas...Sulphuretted hydrogen.
Gold, Muriate of..Chloride of gold.	Hepatitis...Inflammation of the liver.
Gold, Potable.. Liquid gold, solution of a salt of gold.	Hernia...Rupture.
Gold, Terchloride of...Chloride of gold.	Herpes...Tetter, a cutaneous disease.
Gonorrhœa...A flow or discharge of semen, or purulent matter. Also called Spermatorrhœa.	Hicra picra (holy bitter)...Powder of aloes and canella.
Goulard's cerate...Compound lead cerate.	Hirudines...Lecches.
Goulard's extract... Solution of diacetate of lead.	Hoffman's anodyne liquor...Compound sulphuric ether.
Goulard water...Solution of sub-acetate of lead.	Holy water...Distilled water.
Gr., granum...A grain.	Hordei...Barley.
Granati...Pomegranate peel.	Hor. interm., hora intermediis... In the intermediate hours.
Graphite...Black lead.	Hor. merid., hora meridiana... Noon.
Gregory's salt...Crude hydrochlorate of morphia.	Hor. prand., hora prandii...Dinner-time.
Green ointment...Elder ointment.	Hor. a. prand., hora ante prandium ... An hour before dinner.
Green vitriol...Sulphate of iron, copperas.	Hor. p. prand., hora post prandium ...An hour after dinner.
Griffith's mixture..Compound iron mixture.	Hor. un. spatio, hora unius spatio.. At the end of an hour.
Gtt., gutta...A drop.	Hor. 11ma. mat., hora undecima matutina...At 11 o'clock in the morning.
Guinea grains..Grains of paradise.	Hume's test...Solution of ammonio-nitrate of silver.
Guttat., guttatim...By drops.	Humuli...Hops.
H. D., hor. decub., hora decubitus...At bed-time.	Huxham's tincture of bark...Compound tincture of cinchona.
H. P., haustus purgans...Purging draught.	Hydarthrus...White swelling, a disease of the joints.
H. S., hora somni...At bed-time.	Hydragogues ... Medicines which cause watery stools.
Hac...This; hac nocte, to-night.	Hydrargyrum...Mercury, quicksilver.
Hæmatoxyli...Logwood.	Hydrargyrum bichloridum ...Bichloride of mercury.
Hæmoptysis...Spitting of blood.	Hydrargyrum chloridum...Calomel.
Hartal...King's yellow.	Hydrargyrum cum creta...Mercurial powder, quicksilver with chalk.
Haustus...Draught.	
Helminthocorti...Corsican moss.	
Hemorrhage...A bleeding, a flow of blood.	
Hemorrhoids...Piles.	
Hepar antimonii...Liver of antimony, the crude oxysulphuret.	
Hepar sulphuris...Sulphuret of potassium.	

Hydrate...A compound containing water.

Hydrate of lime...Slacked lime.

Hydrocele...A watery tumour in the serotum or testicles.

Hydrocephalus ... Water on the brain, dropsy of the brain.

Hydro-oxygen. Water, sometimes used as a label instead of aqua.

Hydrophobia...Canine madness.

Hydrometra...Dropsy of the womb.

Hydrorachitis ... Dropsy of the spine.

Hydrothorax .... Dropsy of the chest.

Hydrous... Chemically combined with water.

Hyoscyamus...Henbane.

Hyper-oxymuriate...Chlorate.

Hypnotics..Medicines that induce sleep.

Hypocondriasis .... Low melancholy, accompanied by absurd fancies.

Hysteria...Hysterics.

Hysteritis...Inflammation of the womb.

ICTERUS...The jaundice.

Iethyoecollæ...Isinglass.

In dies...Daily.

Influenza...A severe cold in the head or chest, characterized by a great flow of aerid mucus; epidemic catarrh.

Inf., infunde...Infuse.

Infusion...Made with cold or hot water, but not boiled.

Injection...An enema.

In pulm., in pulmento...In gruel.

In pulverem...In powder.

Intermittent...Returning at stated intervals.

Int. scap., inter seapulas..Between the shoulders.

Inulæ...Elecampane.

Iron, Cyanuret of...Prussian blue.

Iron, Ferrideyanide of...Hydro-

ferrideyanate of iron, Turnbull's blue.

Iron, Hydrated sesquioxide of... Rust of iron.

Iron, Pereyanide of..Prussian blue.

Iron, Red oxide of...Peroxide or sesquioxide of iron.

Isehuria...A retention of urine.

JESUITS' balsam...Compound tincture of benzoin.

Jove...An alchemical name for tin.

Jul., julepus, julapium...A julep.

Julep...A term formerly applied to mixtures, as camphor julep, the mistura eamphora.

Jupiter...Tin, an alchemical name.

KAL. PPT., kali preparatum...Prepared kali, carbonate of potash.

Kali acetatum...Acetate of potash.

Kali arseniated...Arseniate of potash.

Kali causticum...Hydrate of potash.

Kali purum...Hydrate of potash.

Kali lemonated..Citrate of potash.

Kali nitratum...Nitrate of potash.

Kali sulphuretum...Sulphuret of potassium.

Kerne's mineral...Oxysulphuret of antimony.

King's yellow...Sesquisulphuret of arsenic, yellow arsenic, orpiment.

Kirkland's neutral erate...Compound lead ointment.

Krameria...Rhatany.

LABARRAQUE's disinfecting liquid ...Solution of chloride of soda.

Lac...Milk.

Lae rosæ...Milk of roses.

Laeerta viridis... Green precipitate.

Lactucarium...Lettuce.

Lady Webster's pills...Pill of aloes and mastie.

Lake, Florence...Carminated lake.  
 Lake, Paris...Carminated lake.  
 Lake, Vienna...Carminated lake.  
 Lambative...A linctus.  
 Lana philosophica...Oxide of zinc.  
 Lapis amiantus...Asbestos.  
 Lapis infernalis...Hydrate of potash, nitrate of silver.  
 Lapis smyrnis...Emery.  
 Lat. dol., lateri dolenti...To the affected side.  
 Lat. dex., Lateri dextro...To the right side.  
 Lat. sin., lateri sinistro...To the left side.  
 Laughing gas...Nitrous oxide gas.  
 Lauro cerasi...Cherry laurel.  
 Lavement...An enema.  
 Laxatives...Mild purgatives.  
 Lb., libra...A pound.  
 Lead, Dichromate of...Chrome red.  
 Lead, Subchromate of...Chrome red.  
 Lead, Red chromate of...Chrome red.  
 Lead, Chromate of...Chrome yellow.  
 Lead, Yellow chromate of...Chrome yellow.  
 Lead, Muriate of...Chloride of lead, patent yellow.  
 Lenitive electuary...Confection of senna.  
 Lepra...The leprosy.  
 Lichenis...Iceland moss.  
 Lignum...Wood.  
 Lignum vitae...Wood of life, guaiacum chips or raspings.  
 Lime, Oxy muriate of...Chloride of lime.  
 Linctus...A medicine of the consistence of honey.  
 Lini...Linseed.  
 Lip salve...Lard ointment.  
 Liquor calcis...Lime water.  
 Liquor potassæ...Solution of potash.  
 Liquor volatilis cornu cervi...Spirit of hartshorn, or a dilute solution of aminonia.  
 Lisbon diet drink...Compound decoction of sarsaparilla.  
 Litharge...Oxide or protoxide of lead.  
 Litmus.... Turnsole, archil, cudbear.  
 Liver of sulphur...Sulphuret of potassium.  
 Liverwort...Iceland moss.  
 Lobelia inflata...Indian tobacco.  
 Lohock...Linctus.  
 Lumbricus...The earth-worm.  
 Luna...The moon, an alchemical name for silver.  
 Lunar caustic...Nitrate of silver.  
 Lupia...A wen or tumour.  
 Lupuli...Hops.  
 Luxation...The dislocation of a bone.  
 Lyttæ...Blistering or Spanish fly, cantharides.  
 M., Misce...Mix.  
 M., Mensura...By measure.  
 M., Manipulus...A handful.  
 M., Minimum...A minim.  
 Magistery of alum...Alumina.  
 Magnesia vitriolata...Sulphate of magnesia.  
 Magnum...Great; cochl. mag., a tablespoonful.  
 Malaguetta pepper...Grains of paradise.  
 Mane...In the morning.  
 Mane pr., mane primo...Early in the morning.  
 Mania...Madness, insanity.  
 Marantæ...Arrow-root.  
 Marcasite...Bismuth.  
 Marcores...Diseases characterized by emaciation or leanness.  
 Marine acid...Hydrochloric acid.  
 Marrubium vulgare...Horehound.  
 Martial regulus of antimony..Sulphuret of antimony and iron fused together.

Martis or Mars...Iron, an alchemical term.	Mercury, Cyanuret of...Cyanide of mercury.
Massa...A mass.	Mereury, Cyanodide of...Cyanide of mercury.
Masticot...Protoxide of lead, yellow pigment.	M., miseæ...Mix.
Meconio...Syrup of poppies.	Mie. panis, mica panis...Crumb of bread.
Mel or mellis...Honey.	Miliaria...A description of fever.
Mel acetatum...Simple oxymel.	Milk of sulphur...Washed and precipitated sulphur.
Mel Ægyptiacum...Liniment of verdigris.	Millepedes...A sort of worm with many feet.
Melaneholia...Melaneholy, a form of insanity.	Mindererus spirit...Acetate of ammonia.
Mel boraeis...Honey of borax.	Mineral chareoal...Coke.
Mel despumatum....Clarified honey.	Minium...Red lead, red oxide of lead.
Menorrhagia...Flooding.	Mist., or MR., mistura...A mixture.
Mensura...Measure.	Mitius...Weak.
Menthæ...Mint.	Mitt., mitte, mittantur...Send, let them be sent.
Menthæ piperitæ...Peppermint.	Mitt. sang. ad ȝ xij., mitte sanguinem ad ȝ xij...Take 12 oz. of blood.
Menthæ viridis...Spearmint.	Mitte tales No. x...Send ten.
Menthæ sativæ...Spearmint.	Mod. præser., modo præscriptio... In the mode prescribed.
Mephitie air...Nitrogen gas.	Mollis...Soft.
Mereurius dulcis ... Chloride of mercury, ealomel.	Monkshood...Aeonite.
Mereury, Ammoniated ... White precipitate, ammonio-chloride of mercury.	Mori...Mulberry.
Mereury, Chloride of...Calomel.	Mor. diet., more dicto...In the manner directed.
Mereury, Dichloride of...Calomel.	Mor. sol., more solito...In the ordinary way.
Mercury, Sub-chloride of...Calomel.	Moschi...Musk.
Mereury, Protochloride of...Calomel.	M. P., massa pilularum...A pill mass.
Mercury, Muriate of...Calomel.	Mueilage...A watery solution of gum, as Arabie or tragæanth.
Mereury, Submuriate of...Calomel.	Muriates...Now termed hydrochlorates.
Mercury, Bichloride of...Corrosive sublimate.	Mutitas...Dumbness.
Mercury, Perechloride of...Corrosive sublimate.	Mynsicht's elixir of vitriol...Aromatic sulphuric acid.
Mercury, Submuriate of...White precipitate.	Mynsicht's tiniture of iron...Ammoniated tincture of iron.
Mercury, Cyanide of...Bicyanide of mercury.	Myristicæ...Nutmeg.
Mercury, Prussian or prussiate of ...Cyanide of mercury.	
Mercury, Hydrocyanate of...Cyanide of mercury.	

N. M., *nux moschata*...A nutmeg.  
 Naphtha *vini*...Ether.  
 Narcotics...Medicines which induce drowsiness and stupor, such as opium, henbane, alcohol, &c.  
 Natron, or prepared natron...Carbonate of soda.  
 Natron *vitriolatum*...Sulphate of soda.  
 Neapolitan ointment...Mercurial ointment.  
 Nephritis...Inflammation of the kidney.  
*Ne tr. s. num., ne tradus sine nummo*...Do not give it without the money.  
 Nickel silver...German silver.  
 Niger...Black.  
 Nihil album...Oxide of zinc.  
 Nitre, *nitrum*...Nitrate of potash.  
 Nitric oxide...Nitrous gas, bin-oxide of nitrogen.  
 Nitrum flammans...Nitrate of ammonia.  
 Nitrum volatile...Nitrate of ammonia.  
 No., numero...In number.  
 Nucis moschatæ...Nutmeg.

O., *octarius*...A pint.  
 Obstipatio...Costiveness.  
 Odontalgia...Toothache.  
 Oil of bricks...Oil of olives mixed with brick-dust and distilled. Generally imitated with a mixture of oils.  
 Oil of camphor...Nitrate of camphor.  
 Oil of sulphur...Olive oil, 1 part, sulphur, 1 part, heated until combination is effected.  
 Oil of tartar...Solution of carbonate of potash.  
 Oil of tariar per deliquium...Carbonate of potash liquefied by exposure to air.  
 Oil of vitriol...Sulphuric acid.

Ol. *jecoris aselli*...Cod liver oil.  
 Ol. *morrhuæ*...Cod liver oil.  
 Olea...Oils.  
 Olefiant gas...Carburetted hydrogen, Dutch liquid.  
 Oleosus...Oily.  
 Oleum ammoniatum...Liniment of ammoniacum.  
 Olim...Formerly.  
 Ol. *lini s. i.*, oleum line sine igne ...Cold-drawn linseed oil.  
 Omn. *bid.*, *omni biduo*...Every two days.  
 Omn. *bih.*, *omni bihorio*...Every two hours.  
 Omn. *hor.*, *omni hora* ... Every hour.  
 Omn. *prim. mane*, *omni primo mane*...Early every morning.  
 Omn. *qua noct.*, *omni quâque nocte*...Every night.  
 Omn. *quadr. hor.*, *omni quadrantes horæ* ... Every quarter hour.  
 O. M., *omni mane*...Every morning.  
 O. N., *omni nocte*...Every night.  
 O. O. O., *oleum olivæ optimum*...Best olive oil.  
 Ophthalmia...Inflammation of the membranes of the eye.  
 Ophthalmia...Inflammation of the eye.  
 Opodeldoc...Soap liniment.  
 Or...Gold.  
 Orelline...Purified annatto.  
 Orpiment...King's yellow, sesqui-sulphuret of arsenic.  
 Oryzæ...Rice.  
 Ov., *ovi* or *ovum*...An egg.  
 Oxide of calcium...Lime.  
 Oxide of Ethule...Ether.  
 Oxide of sodium...Soda.  
 Oxychlorides...Subchlorides, sub-muriates.  
 Oxygenized lard...Nitric acid ointment.  
 Oxymel *Æruginis*...Liniment of verdigris.

Oxymuriate...Chlorate.	Peroxide of chlorine...Chlorous acid.
Oxymuriate of mercury...Bichloride of mercury, corrosive sublimate.	Per. op. emet., peractâ operatione emetica...After the operation of the emetic.
Oxymuriatic acid...Chlorine.	Persicæ...Peach leaves.
P. PONDERE...By weight.	Pertussis...The hooping-cough.
P. æq., partes æquales...Equal parts.	Pestis...The plague.
Palpitatio...Palpitation or throbbing of the heart.	Ph. D...Dublin Pharmacopœia.
Panacea...A universal remedy.	Ph. E...Edinburgh Pharmacopœia.
Panis...Bread.	Ph. L...London Pharmacopœia.
Papaveris...Poppies.	Ph. U. S...United States Pharmacopœia.
Paracusis...Disordered hearing.	Philonium Londinense ( <i>P. L.</i> 1745.)...Confection of opium.
Paralysis...The palsy.	Philonium Romanum ( <i>P. R.</i> 1720.)...Confection of opium.
Paramenia...Mismenstruation.	Phlegmasia...Inflammation.
Paraphonia ... Alteration of the voice.	Phlogisticated air...Nitrogen gas.
Paregoric...Compound tincture of camphor.	Phlogosis...Inflammation.
Partitis haustibus ... In divided draughts.	Phrenitis...Frenzy, inflammation of the brain.
Part. vic., partitis vicibus... In separate doses.	Physconia...Enlargement of the abdomen.
Parvum...Little. Cochl. parv...A teaspoonful.	Physical salt...Sulphate of magnesia.
Pasta regia...Almond paste.	Physometra...A windy swelling of the uterus.
Pastes...Factitious, or imitative stones and gems.	Pica...Depraved appetite, with a desire for unnatural food.
Past., pastillus...A mass of paste.	Picis liquidæ...Tar.
P. d., per deliquium...By deliquescence, melting in the open air.	Picis nigræ...Pitch.
Pearl powder ... Subchloride of bismuth.	Pil Ruci...Pill of aloes and myrrh.
Pearl white...Trisnitrate or sub-nitrate of bismuth.	Pimento...Allspice.
Pectoral balsam of honey...Tincture of benzoin.	Pink-root...Spigellæ.
Pemphigus...An eruption attended by fever.	Piperis...Pepper.
Pericarditis...Inflammation of the sac and membranc containing the heart.	Pisa pro fonticulus...Issue peas.
Peritonitis...Inflammation of the membrane which lines the belly, and covers the intestines.	Pix abietina...Burgundy pitch.
Pernio...A chiiblain.	Pleuritis...Pleurisy, an inflammation of the lining membrane of the lungs.
	Plumbago...Black lead.
	Plumbi...Lead.
	Plumbi iodidi...Iodide of lead.
	Plummer's pills...Compound calomel pill.
	Pneumonia...Inflammation of the lungs.

Pocil., pocillum...A small cup.	Prussic acid...Hydrocyanic acid.
Pocul., poculum...A cup.	Psellismus...Defect in speech.
Podagra...The gout.	Psora...The itch.
Polydipsia...Excessive thirst.	Ptisan...Plain drink, as barley water, &c.
Polysarcia...Fatness of the body.	Ptyalism...An increased flow of saliva.
Pompholyx...Oxide of zinc.	Pug., pugillus...A pinch.
Porrigo...Ringworm.	Pulegii...Pennyroyal.
Post horas duas...After two hours.	Pulv., pulvis...A powder.
Post pilulas...After the pills.	Pulvis stanni...Tin filings or powder.
Post sing. sed. liq., post singulas sedes liquidas ... After every loose stool.	Purgatives ... Medicines which quicken the action of the bowels.
Potash, caustic...Hydrate of potash.	Purificatum...Purified.
Potash, prussiate of...Ferrocyanide of potassium.	Purpura...Scurvy, land scurvy.
Potash, pure...Hydrate of potash.	Pyrethri...Pellitory of Spain.
Potash, red prussiate of...Ferridcyanide of potassium.	Pyrola .... Chimaphilæ, winter green.
Potash, supersulphate of...Bisulphate of potash.	Pyroligneous acid ...Vinegar of wood.
Potash, supertartrate of...Bitartrate of potash.	Pyroxilic acid...Wood naphtha.
Potassa fusa...Hydrate of potash.	Q. L., QUANTUM libet...As much as you please.
Potassæ sulphuretum...Sulphuret of potassium.	Q. P., quantum placet...As much as you please.
Potential cautery...Potash with lime.	Q. S., Quantum sufficiat...A sufficient quantity.
Potion...A drink.	Quadraginta...Forty.
Potus...A drink.	Quam primum...As soon as possible.
Powder basilic...Compound powder of scammony.	Quartana...Ague returning every 72 hours.
Powder royal...Compound powder of scammony.	Quercus...Oak bark.
Ppt., preparata...Prepared.	Quinine, Subsulphate of ... Sulphate of Quinine.
P. rat. aetat., pro ratione aetatis... According to the age.	Quinine, Disulphate of...Sulphate of Quinine.
P. r. n., pro re nata...As occasion requires.	Quintessence of Noyeau...Bitter almond flavour.
Precipitate, sweet...Calomel.	Quor., quorum...Of which.
Prolapsus...A falling down, as of the uterus or anus.	Quotidiana .... Ague returning every 24 hours.
Protoxide of hydrogen...Water.	Quotidic...Daily.
Protoxide of nitrogen...Nitrous oxide gas.	Quovis...Any.
Pruni sylvestris...Sloes.	Q. v., quantum vis...As much as you choose.
Prussiate...Ferrocyanide or cyanide.	

RADIX, ... cis... Root.	Rouge...Oxide of iron.
Raphani...Horse-radish.	Rubeola...The measles.
Rattlesnake root...Senega.	Rufus's pills...Pill of Aloes and Myrrh.
Realgar..Red sulphuret of arsenic.	Rumicis...Waterdock.
Recipe...Take.	Rutæ...Rue.
Red. in pulv., redactus in pulvrem...Reduced to powder.	S. A., SECUNDEM artem...According to art.
Redig. in pulv., redigatur in pulvarem...Reduce it to powder.	Sabinæ...Savine.
Red hartshorn...Compound tincture of lavender.	Saccharum...Sugar.
Red pill...Compound calomel pill.	Saccharum candum..Sugar candy.
Red precipitate...Nitric oxide of mercury.	Saccharum lactis...Sugar of milk.
Red Sanders wood...Sandal wood.	Sachet...A little bag to contain any substance for local application.
Refrigerants .... Cooling liquids which abate heat and thirst.	Sal...Salt.
Regulus, <i>little king</i> ...A term applied by alchemists to metallic antimony, &c.	Salabsinthii..Carbonate of potash.
Regulus of arsenic...Black arsenic, metallic arsenic.	Salacetosellæ...Binoxalate of potash.
Regulus of cobalt...Cobalt, the metal.	Sal alembroth ...The alchemist's salt of wisdom, a compound of sal ammoniac and corrosive sublimate, equal parts.
Reg. umbil...regio umbilici...The region of the navel.	Sal ammoniac ..Hydrochlorate or muriate of ammonia.
Regulus jovis...Tin and martial regulus of antimony fused together.	Sal auri philosophicum ...Bisulphate of potash.
Repet...repetatur...Repeat.	Sal diureticus...Acetate of potash.
Rhamni...Buckthorn.	Sal enixum...Bisulphate of potash.
Rhatany...Krameria.	Sal gemmæ ... Common or rock salt.
Rhcados...The red poppy.	Sal martis...Sulphate of iron.
Rhei...Rhubarb.	Sal mirabile Glauberi...Sulphate of soda.
Rheumatism...A painful affection of the joints and fibrous textures.	Sal mirabile perlatum..Phosphate of soda.
Ricini...Castor oil.	Sal polychrest...Salt of soda.
Rob...Extract, any inspissated juice.	Sal prunella...Fused nitre.
Rochelle salt...Potassio-tartrate of soda.	Sal sapientiae...Salt of wisdom, sal alembroth.
Rock oil...Naphtha.	Sal Saturni...Acetate of lead.
Roman alum...A pure reddish-coloured alum.	Salad oil...Olive oil.
Roman vitriol...Sulphate of copper.	Salicis...Willow.
Rousseau's Laudanum...Fermented wine of opium.	Saline...Salt.
	Salis nitri...Nitre, saltpetre.
	Salt of chrome...Chromate of potash.

Salt (common or culinary)...Hydrochlorate or muriate of soda.	Semih., semihora...Half an hour.
Salt of Mars...Copperas, sulphate of iron.	Senega...Rattlesnake root.
Salt of sorrel...Binoxalate of potash.	Serum lactis...Whey.
Salt of tartar...Carbonate of potash.	Sesquichloride...Chloride.
Salt of wormwood...Carbonate of potash.	Sesquih., sesquihora...An hour and a half.
Saltpetre...Nitrate of potash.	Sesquioxide...Oxide.
Salviæ...Sage.	Sesunc., sesuncia...Half an ounce.
Sambuci...Elder, the bark.	Sevi...Suet.
Sandiver...The scum of newly melted glass.	Sialogogues ... Substances which increase the flow of saliva.
Santonici...Wormseed.	Si n. val., si non valeat...If it does not succeed.
Sapan wood...Brazil wood.	Si op. sit., si opus sit...If necessary.
Sapo, saponæ...Soap.	Si vir. perm., si vires permittant... If the strength allows it.
Sarcoma...A fleshy tumour.	Sign. n. pr., signetur nomine proprio...Inscribe it with the common name.
Sarzæ...Sarsaparilla.	Signat., signatura...A label.
Saturn...Lead.	Signetur...Label it.
Saundier's blue .... Ultramarine ashes.	Simplex...Simple.
Saxon blue...Sulphate of indigo.	Sinapis...Mustard.
Scabies...The itch.	Sinapis farina...Flour of mustard.
Scald head...Ring-worm.	Sing., singulorum...Of each.
Scarlatina...The scarlet fever.	S. n., secundem naturem..According to nature.
Scat., scatula...A box.	Soapstone...French chalk.
Scheele's green...Arsenite of copper.	Sodæ chlorinatæ ... Chloride of soda.
Scillæ...Squills.	Soluble tartar...Tartrate of potash.
Scirrhous...A cancer in the early stage.	Solutive water...Nitric acid.
Scoparii...Spartii, broom-tops.	Sparadrapum pro fonticulus...Issue plasters.
Scorbutus...The scurvy.	Spartii...Broom-tops, scoparii.
Scot's pills...Pill of aloes.	Spermatorrhœa or Gonorrhœa... A flow or discharge of semen or purulent matter.
Scorbutus...Scurvy.	Spigelliae...Pink root.
Serofula...The king's evil, hard indolent tumours on various parts of the body.	Spirit of Mindererus...Acetate of ammonia.
Secale cornuti...Ergot of rye.	Spirit of nitre...Nitric acid.
Sedative...Soothing, easing pain.	Spiritus nitri Glauberi ...Nitric acid.
Sedatives...Medicines which allay pain or undue excitement.	Spiritus salis...Hydrochloric acid.
Seignettc's salt...Potassio-tartrate of soda.	Spirit of salt...Muriatic, or hydrochloric acid.
Semi...Half.	
Semid., semidrachma ... Half a drachm.	

Spiritus vini Gallici...Brandy.	Suppository...A medicine placed in the rectum.
Spirit of vitriol...Sulphuric acid.	S. v., spiritus vini ... Spirit of wine.
Splenitis...Inflammation of the spleen.	S. v. r., spiritus vini rectificatus ...Rectified spirit of wine.
S. S., stat. sumend...Take immediately.	S. v. t., spiritus vini tenuis...Proof spirit.
Ss., semi...A half; as, jss., one and a half.	Sweet oil...Olive oil.
S. s. s., stratum super stratum...	Sweet elixir of vitriol...Aromatic sulphuric ether.
Layer upon layer.	Sweet spirits of nitre ... Nitric ether.
Stannum, stanni...Tin.	Sweet spirit of vitriol...Sulphuric ether, ether.
Steatite...French chalk.	Sydenham's Liquid Laudanum...
Steel...Preparations of iron, carbonate, or sesquioxide of iron.	Wine of opium, formerly ordered as L. L. Syd.
Stibiated tartar ... Potassio-tartrate of antimony.	Syncope...Fainting.
St., stet, stent...Let it or them stand.	Synocha...A rare form of fever.
Stimulants...Medicines or liquids which revive the system. Their use is often followed by a corresponding amount of depression.	Synochus...Common or continued fever.
Strabismus...Squinting.	Syphilis...The venereal disease.
Stramonium...Thorn apple.	Syrupus aceti...Simple oxymel.
Strengthening plaster...Oxide of iron plaster.	TABACI...Tobacco.
Strychnine...A preparation of nux vomica.	Tabel., tabella...A lozenge.
Stygian water...Hydrofluoric acid, aqua stygis.	Tabes...A wasting of the body.
Sub fin. coct., sub finem coctionis ...When the boiling is nearly finished.	Talc earth...Magnesia.
Sublimate, Sweet...Calomel.	Tanacetii...Tansy, the herb.
Succinum...Amber.	Taraxacum...Dandelion.
Succus...Juice.	Tartar emetic...Potassio-tartrate of antimony.
Sugar of lead...Acetate or super-acetate of lead.	Temp. dext., tempori dextro...To the right temple.
Sulphur vivum...Crude or native sulphur.	Temp. sin., tempori sinistro...To the left temple.
Sulphuris iodidum...Iodide of sulphur.	Ter...Three, three times.
Sum tal., sumat talem...Give the patient one like this.	Terchloride of carbon...Chloric ether.
Sum., sumat, &c...Let the patient take.	Tercyanide...Cyanide or cyanuret.
Summ., summitates...The summits or tops.	Terebinth...Turpentine.
	Terra...Earth.
	Terra foliatis mineralis...Acetate of soda.
	Tertiana...Ague returning every 48 hours.
	Tetanus...Lock-jaw.

Theæ...Tea.	Unguentum lithargyri...Oxide of lead ointment.
Thebaicum...Opium.	Unguentum veratri ... Hellebore ointment.
Thenard's blue...Cobalt blue.	Unguentum viride...Elder ointment.
Theriaca ... Treacle; medicines against poison.	Urticaria...The nettle-rash.
Thridace...Lactucarium.	Ustæ...Burnt; Spongæ ustæ... Burnt sponge.
Tinctura hiera picra...Wine of aloes.	Uvæ ursi...Whortleberry.
Tinctura Thebaica..Wine of opium.	VARICELLA...Chicken-pox.
Tinctura sacra...Wine of aloes.	Variola...Small-pox.
Tinea...Scald-head.	Variola vaccina...Cow-pox.
Tin glass...Bismuth.	Varix...Dilated or varicose veins, having tumours or knots in them.
T. O., tinctura opii...Tincture of opium.	Venice turpentine ... Rosin and turpentine.
T. O. C., tinctura opii camphorata ... Camphorated tincture of opium.	Ventre jejunio...Fasting, the stomach being empty.
Tonics...Medicines which improve the state of the digestive functions, and eventually give a healthy tone to the whole system.	Verdigris...Sub or diacetate of copper, rust of copper.
Tr., tinctura...A tincture.	Vermes...Worms.
Trip...Oxide of iron.	Vermifuges...Anthelmintics, medicines which expel worms.
Troch., trochisci...Lozenges.	Vermilion...Bisulphate of mercury.
Turbith's mineral ...Subsulphate of mercury, yellow sulphate of mercury, queen's yellow.	Verruca...A wart.
Turmeric...Curcuma.	Vini...Wine.
Turner's cerate...Calamine cerate.	Vinum Hispanicum...White wine, sherry.
Turnsole...Litmus, archil, cudbear.	Vinum rubrum...Port wine.
Turps...Turpentine.	Vital air...Oxygen gas.
Tussilaginis...Coltsfoot.	Vitello ovi...The yolk of an egg.
Tutty...Impure oxide of zinc.	Vitriol...Sulphuric acid.
Typhus...A severe form of fever.	Vitriol of Mars...Sulphate of iron, copperas.
ULMI...Elm, the bark.	Vitriolic acid...Sulphuric acid.
Ult. præser., ultimo præscriptus ...The last prescribed.	Vitriolic naphtha...Ether.
Ultramarine (beyond the sea)... A blue pigment.	Vitrum antimonii...Glass of antimony, calcined antimony.
Unction...Mercurial ointment.	Vitrum pulverisatum...Powdered glass.
Unguentum...Ointment.	Volatile alkali...Ammonia.
Unguentum album...Carbonate of lead ointment, spermaceti ointment.	Volatile liniment...Liniment of ammonia.
Unguentum Ægyptiacum...Liniment of verdigris.	Volatile salts...Carbonate or sesquicarbonate of ammonia.

V. O. S., vitello ovi solutus...	Dis- solved in the yolk of an egg.	Wilson's Eau Medicinale...Tinc- ture of colchicum.
Vom. urg., vomitione urgente...	When the vomiting is trouble- some.	Wolfsbane...Aconite.
V. S., venesectio...	Bleeding.	Wood naphtha...Pyroxilic spirit.
V. S. ad $\tilde{\Sigma}$ x...	Bleed to ten ounces.	YELLOW wash...Corrosive subli- mate and lime water, used to sores.
V. S. B., venesectio brachii...	Bleed from the arm.	Yellow ointment...Nitrate of mer- cury ointment.
Vulnus...	A wound.	
WARD's essence...	Compound cam- phor liniment.	ZIBETHUM...Civet.
Ward's paste...	Confection of black pepper.	Zinc, butter of...Chloride of zinc.
White copper...	German silver.	Zinc, muriate of...Chloride of zinc.
White ointment...	Carbonate of lead ointment, spermaceti oint- ment.	Zingiberis...Ginger.
White precipitate ointment...	Oint- ment of ammonio-chloride of mercury.	Zymotic diseases....Literally fer- mentative diseases, as small- pox or measles; applied to dis- eases which are endemic, epi- demic or contagious.
		Zz., zingiber...Ginger.
		ZZ...Gum myrrh.



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